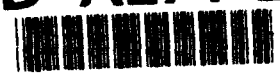
AD-A271 241



DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

rmation is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this or reducing this burden, to Washington Headquarters Services, Directorate for information operations and Reports, 1215 Jefferson -302, and to the Office of Management and Budget, Paperwork Reduction Project(0704-0188), Washington, DC 20503.

2. REPORT DATE	3. REPORT TYPE AND DATES COVERED

1. TITLE AND SUBTITLE
ROCKY MOUNTAIN ARSENAL, NORTH BOUNDARY CONTAINMENT/TREATMENT SYSTEM, OPERATIONAL ASSESSMENT REPORT, FY85/FY86

Vol II

5. FUNDING NUMBERS

6. AUTHOR(S)

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
ROCKY MOUNTAIN ARSENAL (CO.). PHRMA

8. PERFORMING ORGANIZATION REPORT NUMBER
87320R01

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
ARMY ENGINEER WATERWAYS EXPERIMENT STATION

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

DTIC ELECTE OCT. 25 1993 S B D

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT
APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

THIS REPORT IS THE SECOND IN A SERIES OF REPORTS PREPARED TO DOCUMENT AND ASSESS THE STATUS AND OVERALL OPERATIONAL PERFORMANCE OF THE NORTH BOUNDARY CONTAINMENT/TREATMENT SYSTEM. THE REPORT CONSISTS OF THREE VOLUMES: VOLUME I IS THE MAIN TEXT; VOLUME II CONTAINS THE HYDROGEOLOGIC AND CONTAMINANT DISTRIBUTION PLATES; AND VOLUME III CONTAINS THE DATABASES DEVELOPED TO SUPPORT THE EVALUATIONS AND ASSESSMENTS MADE DURING THE STUDY.

THE OBJECTIVES OF THE REPORT INCLUDE:

1. ASSESS THE CONTINUING EFFECTIVENESS OF THE NORTH BOUNDARY SYSTEM IN PREVENTING OFF-POST MIGRATION OF CONTAMINATED GROUND WATER
2. DOCUMENT SYSTEM OPERATING PARAMETERS
3. IDENTIFY AND DOCUMENT SYSTEM IMPROVEMENTS
4. IDENTIFY AND DOCUMENT OPERATIONAL IMPROVEMENTS THAT WILL ENHANCE LONG-TERM EFFECTIVENESS.

DATA IN VOLUME II INCLUDE WEEKLY ADSORBER FLOWS, WATER QUALITY, AND WATER

14. SUBJECT TERMS	15. NUMBER OF PAGES
GROUNDWATER	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED			

ROCKY MOUNTAIN ARSENAL
NORTH BOUNDARY CONTAINMENT/TREATMENT SYSTEM
OPERATIONAL ASSESSMENT REPORT

FY85/FY86

VOLUME II
PLATES

by

Program Manager Staff Office
Program Manager, Rocky Mountain Arsenal
Contamination Cleanup
Aberdeen Proving Ground, Maryland 21010-5401

June 1987

93-25183

93 10 19 204

87320R01
VOLUME II
2ND COPY

RTIC
07002

NTAIN ARSENAL
INMENT/TREATMENT SYSTEM
SSESSMENT REPORT

35/FY86

LUME II
ATES

by

nager Staff Office
Rocky Mountain Arsenal
ation Cleanup
ound, Maryland 21010-5401

ne 1987

93-25183

(2)

FILE COPY

Rocky Mountain Arsenal
Information Center
Commerce City, Colorado

(1)

87320R01
2nd Copy
Vol II

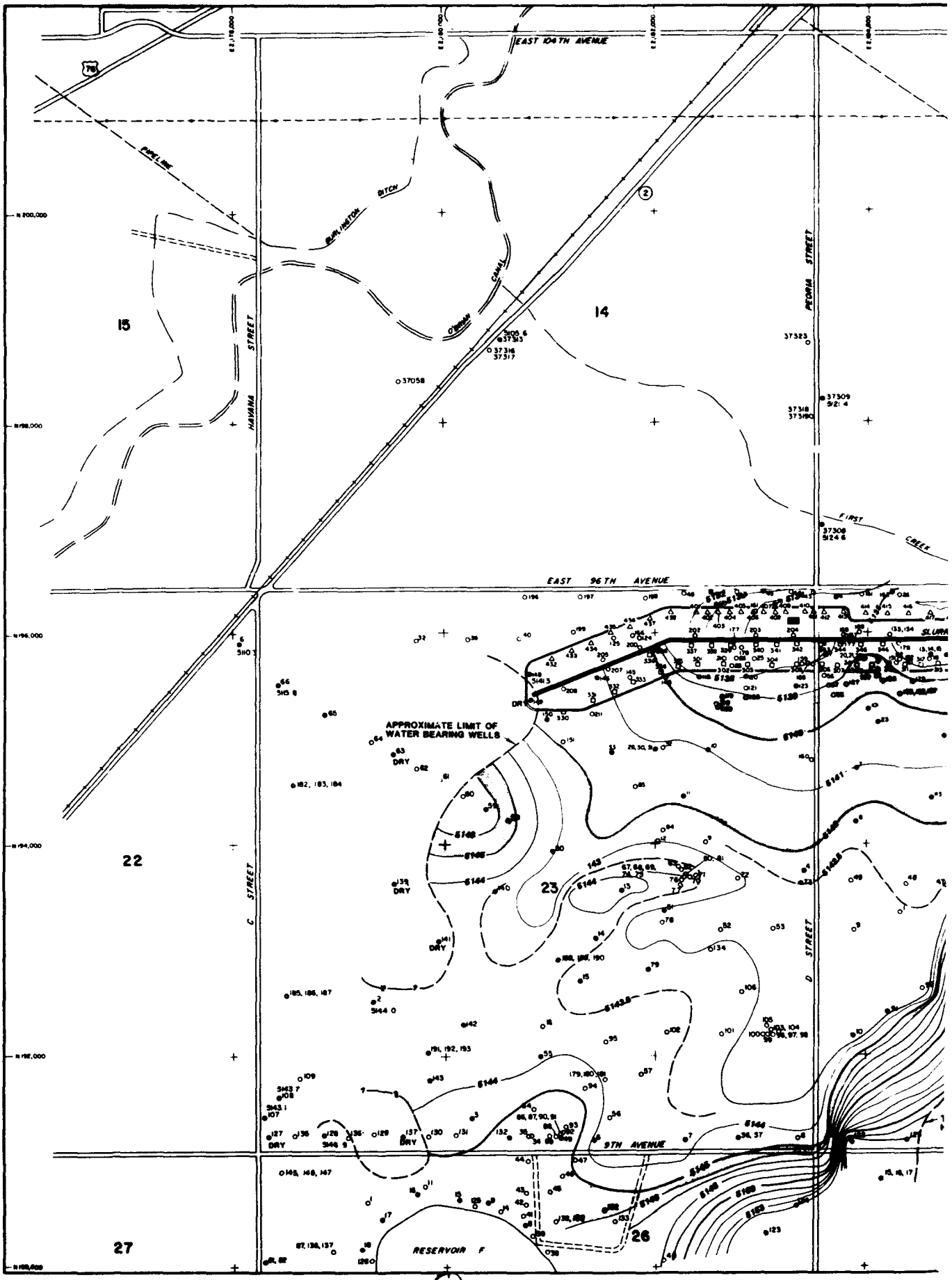
FILE COPY

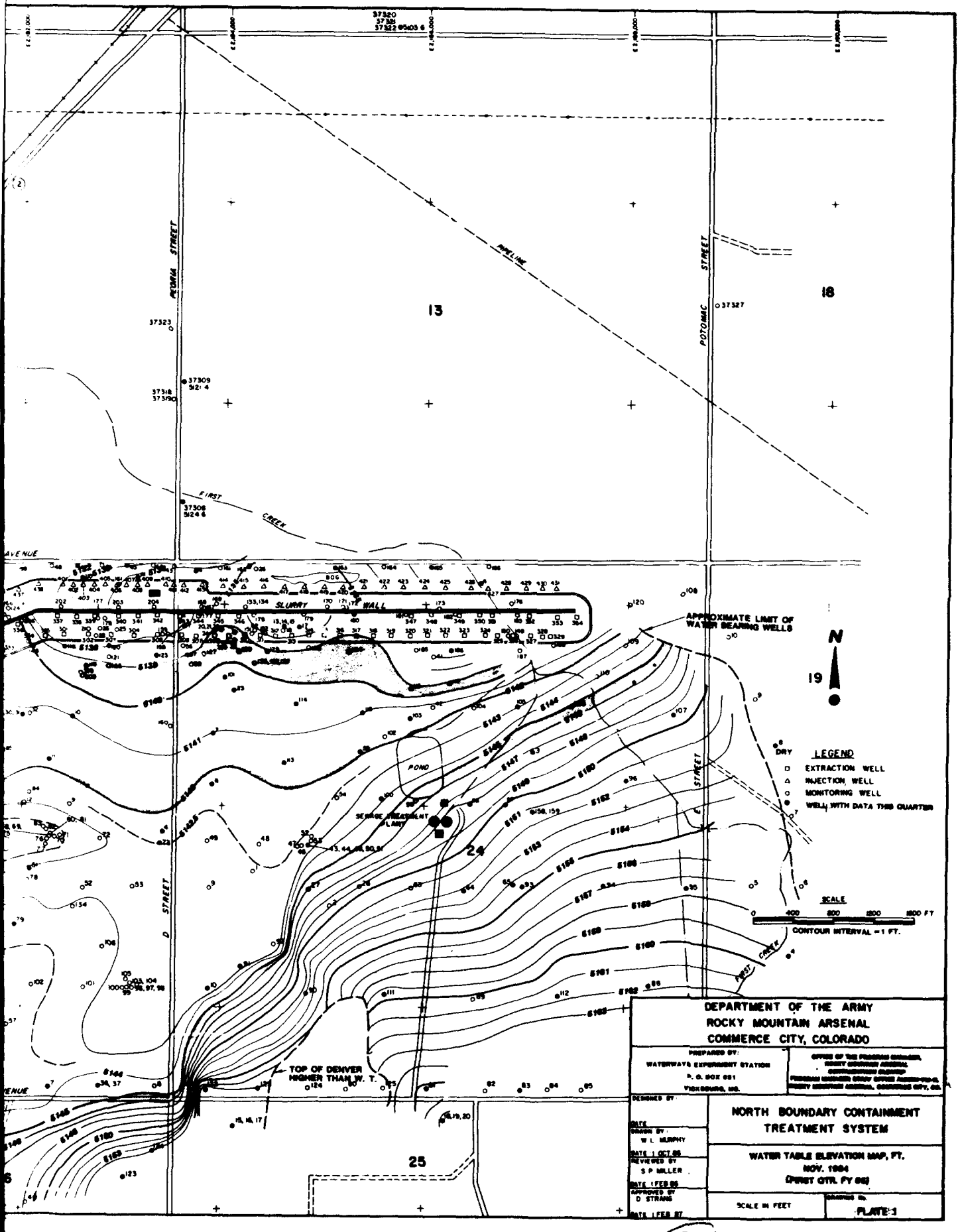
Arsenal
Center
Colorado

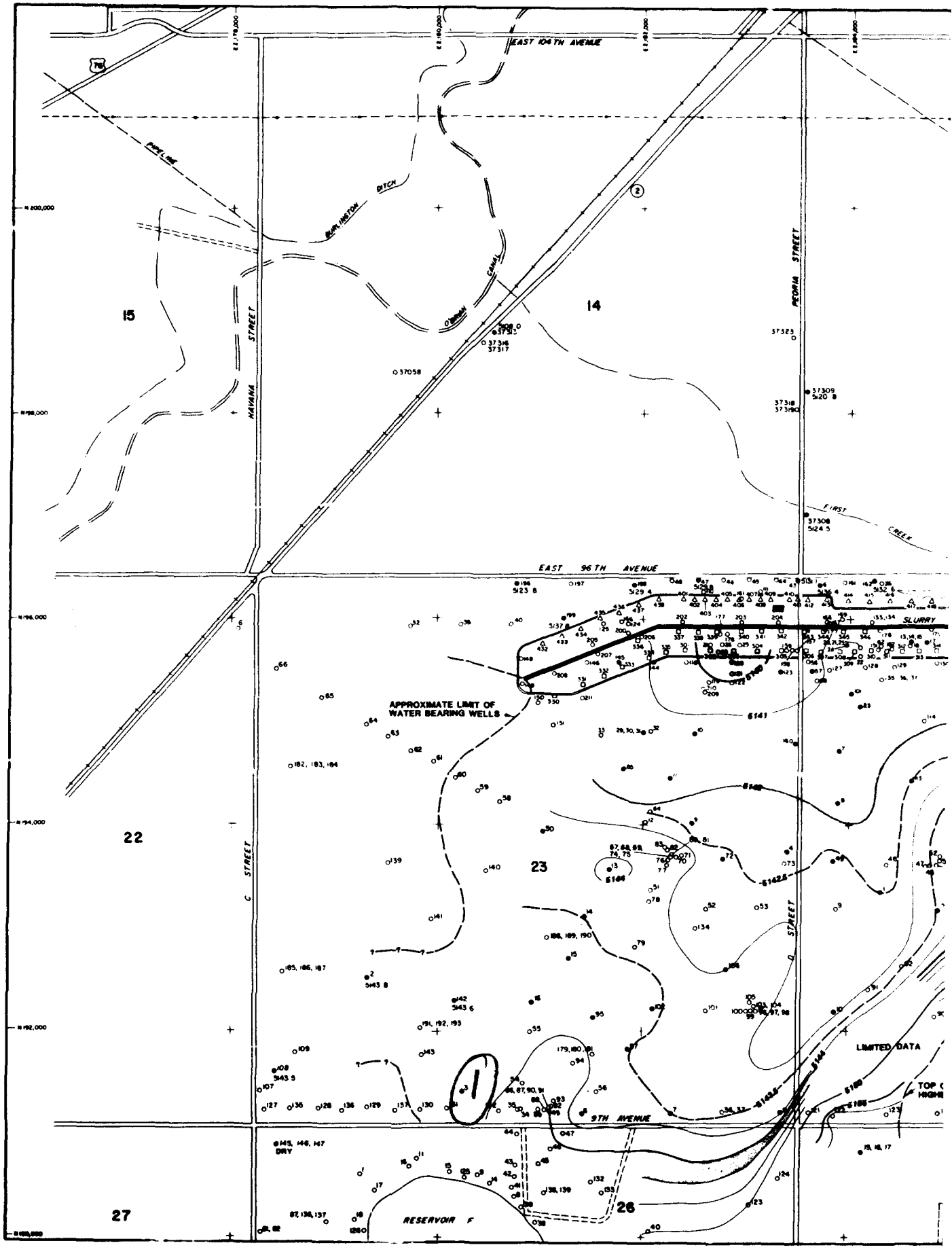
DTIC QUALITY INSPECTED

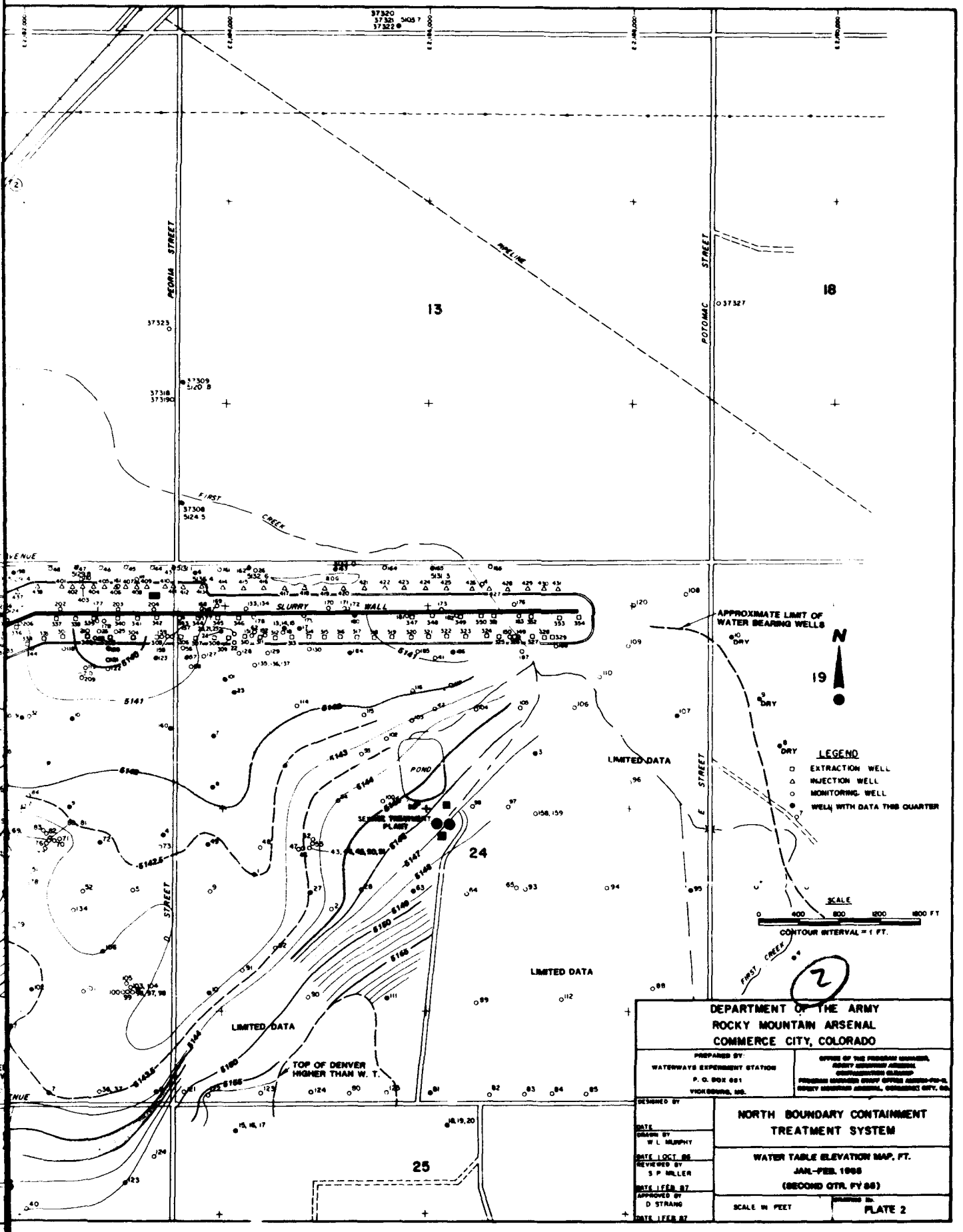
Accession For
NTIS GRA&I
DTIC TAB
Unannounced
Justification
By
Distribution/
Availability Codes
Dist. Avail and/or Special
A-1

(2)


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
D STREET
PIPELINE
BURLINGTON DITCH
O'BRIAN CANAL
FIRST CREEK
APPROXIMATE LIMIT OF WATER BEARING WELLS
RESERVOIR F
15
14
22
23
26
27
DRY


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
APPROXIMATE LIMIT OF WATER BEARING WELLS
POND
SEWAGE TREATMENT PLANT
TOP OF DENVER HIGHER THAN W. T.
13
18
19
24
25
N
DRY
LEGEND
EXTRACTION WELL
INJECTION WELL
MONITORING WELL
WELL WITH DATA THIS QUARTER
SCALE
0 400 800 1200 1600 FT
CONTOUR INTERVAL = 1 FT.
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY:
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY
W L MURPHY
DATE 1 OCT 86
REVIEWED BY
S P MILLER
DATE 1 FEB 87
APPROVED BY
D STRANG
DATE 1 FEB 87
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM
WATER TABLE ELEVATION MAP, FT.
NOV. 1984
(FIRST QTR. FY 85)
SCALE IN FEET
DRAWING No.
PLATE 1


EAST 104TH AVENUE
PIPE LINE
BARRINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
FIRST CREEK
EAST 96TH AVENUE
APPROXIMATE LIMIT OF WATER BEARING WELLS
SLURRY
LIMITED DATA
C STREET
D STREET
96TH AVENUE
RESERVOIR F
15
14
22
23
26
27
1
2



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY:
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

DESIGNED BY

DRAWN BY
W L MURPHY
DATE OCT 86

REVIEWED BY
S P MILLER
DATE FEB 87

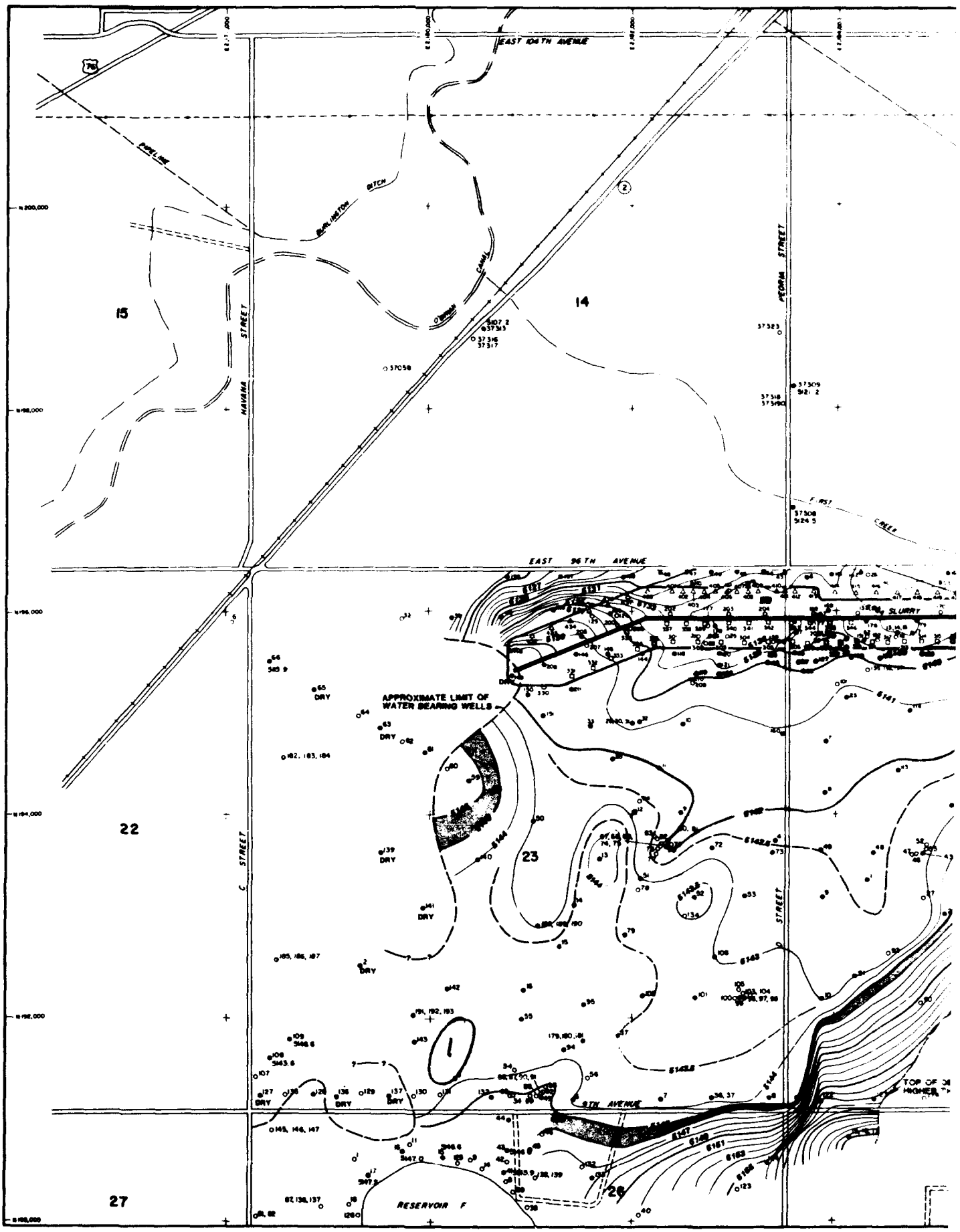
APPROVED BY
D STRANG
DATE FEB 87

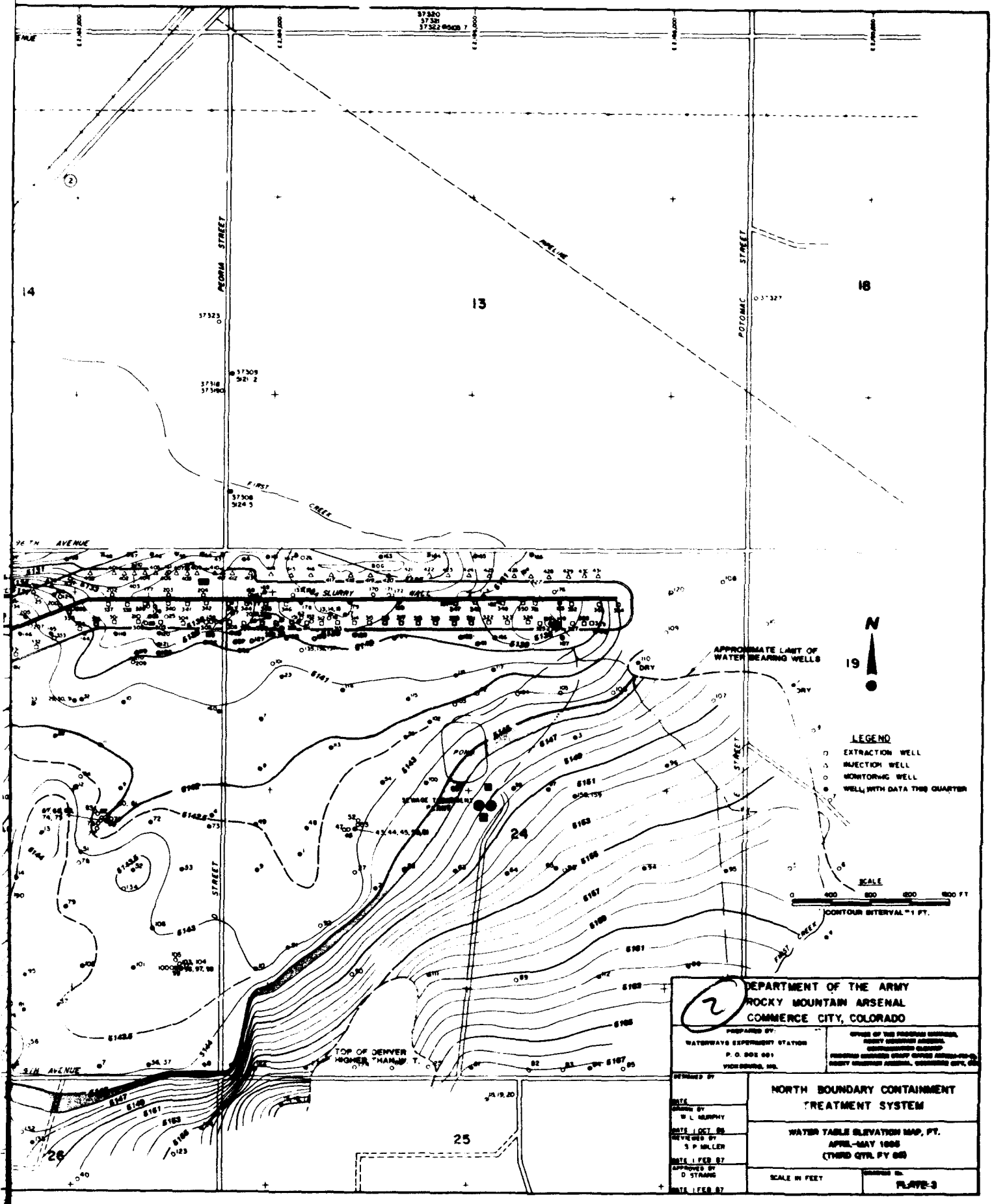
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

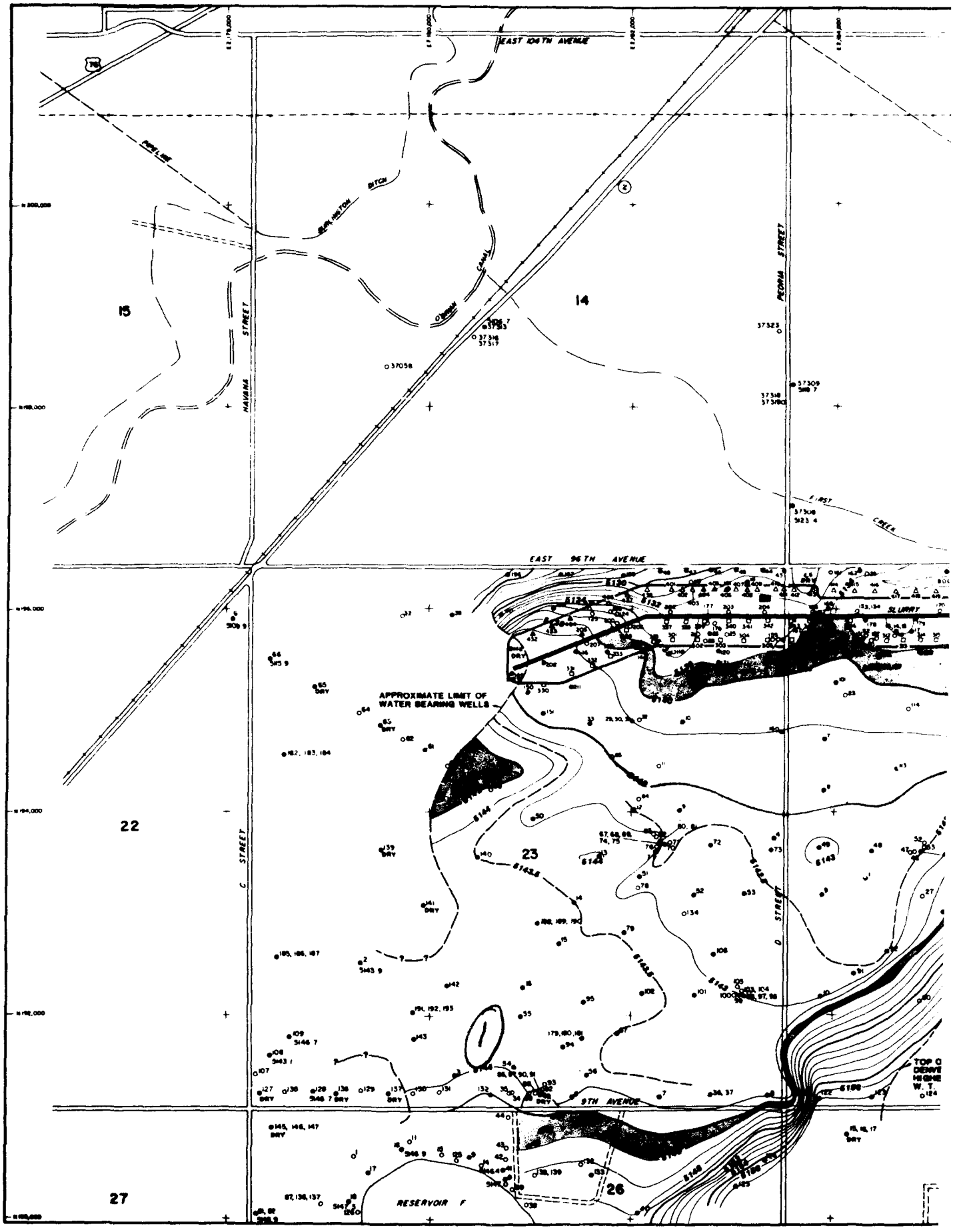
WATER TABLE ELEVATION MAP, FT.
JAN-FEB 1986
(SECOND QTR. FY 86)

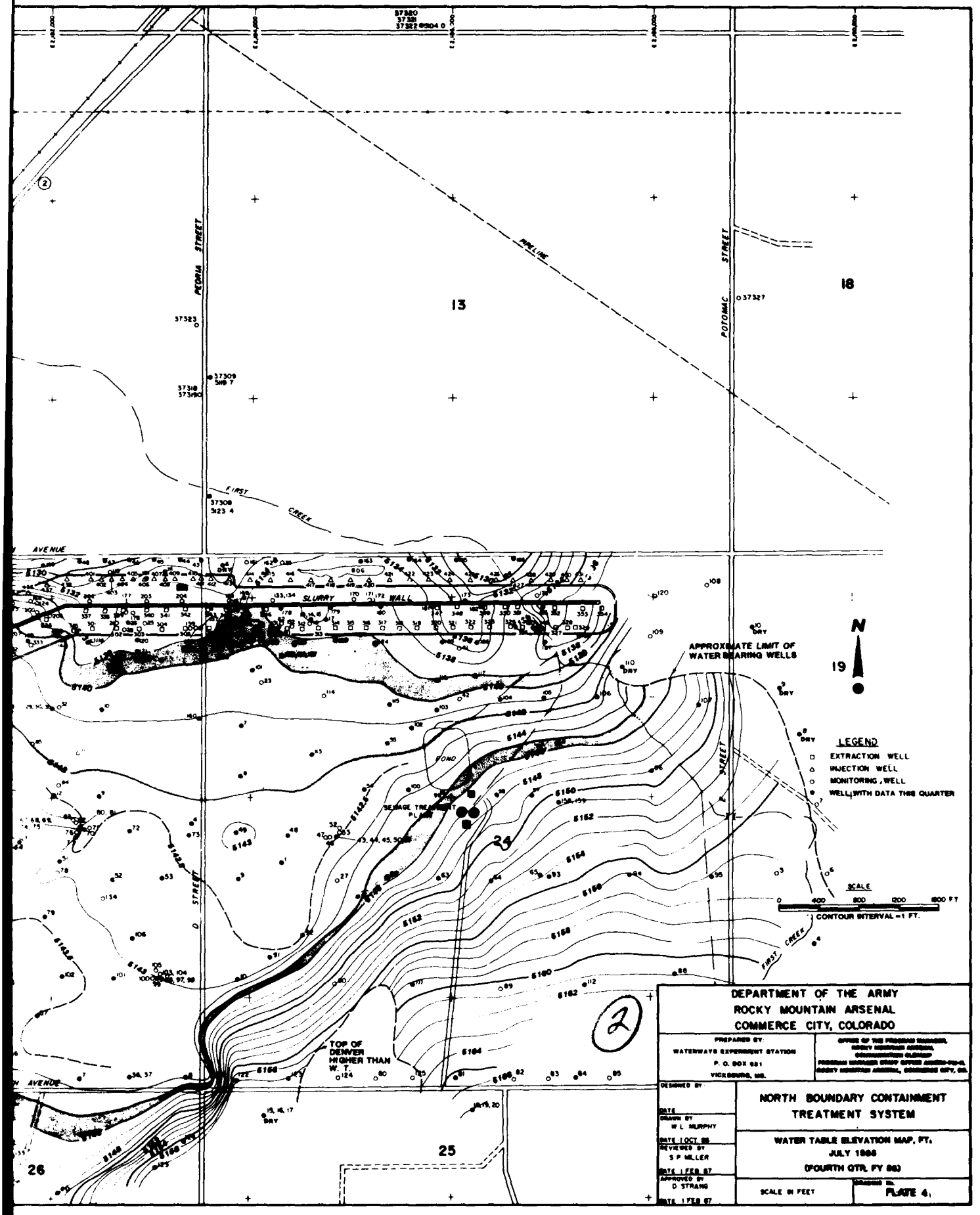
SCALE IN FEET

DRAWING No.
PLATE 2

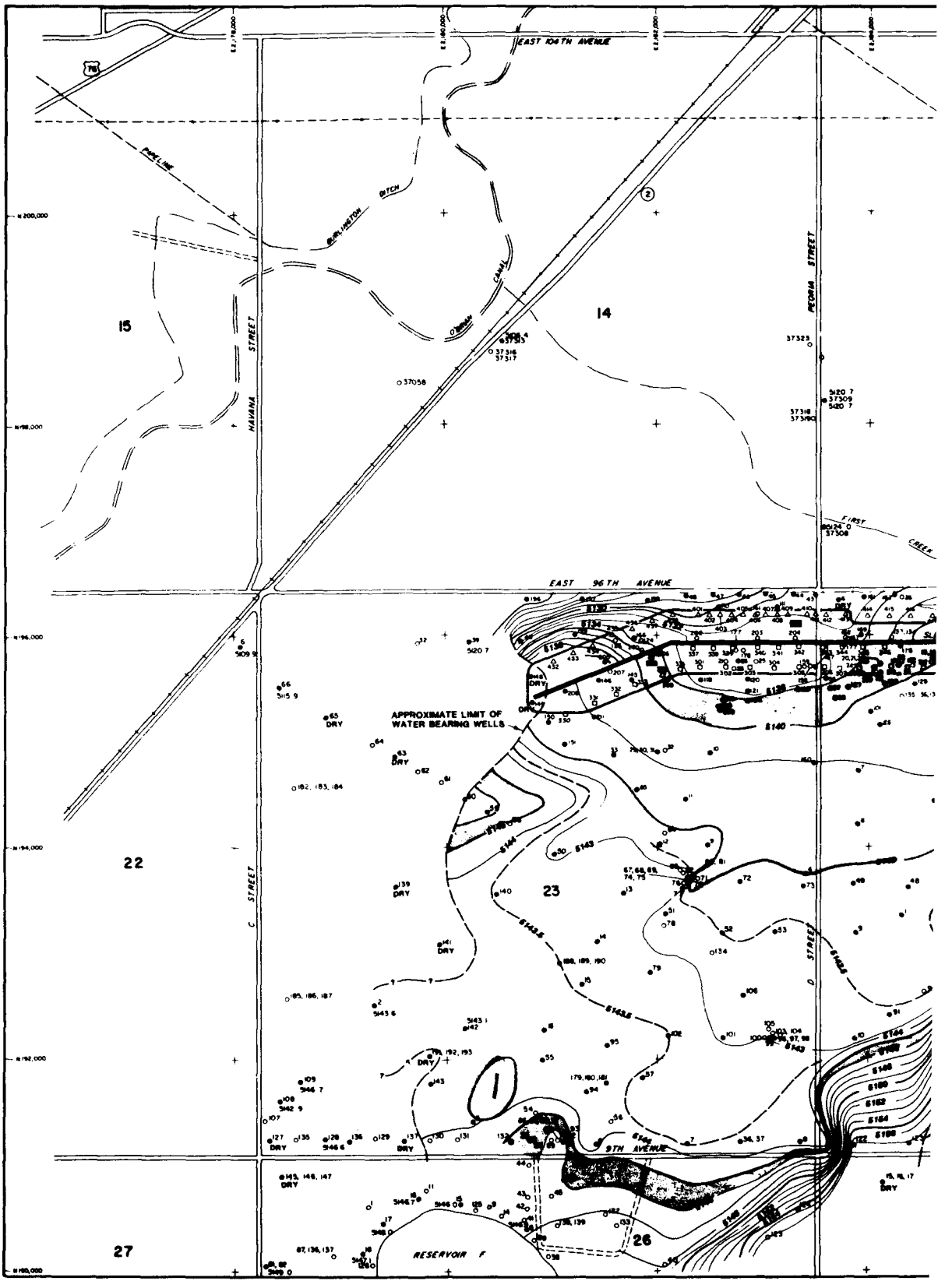

EAST 104TH AVENUE
PARK LINE
BARLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
APPROXIMATE LIMIT OF WATER BEARING WELLS
SLURRY
C STREET
96TH AVENUE
RESERVOIR F
15
14
22
23
27
26
1

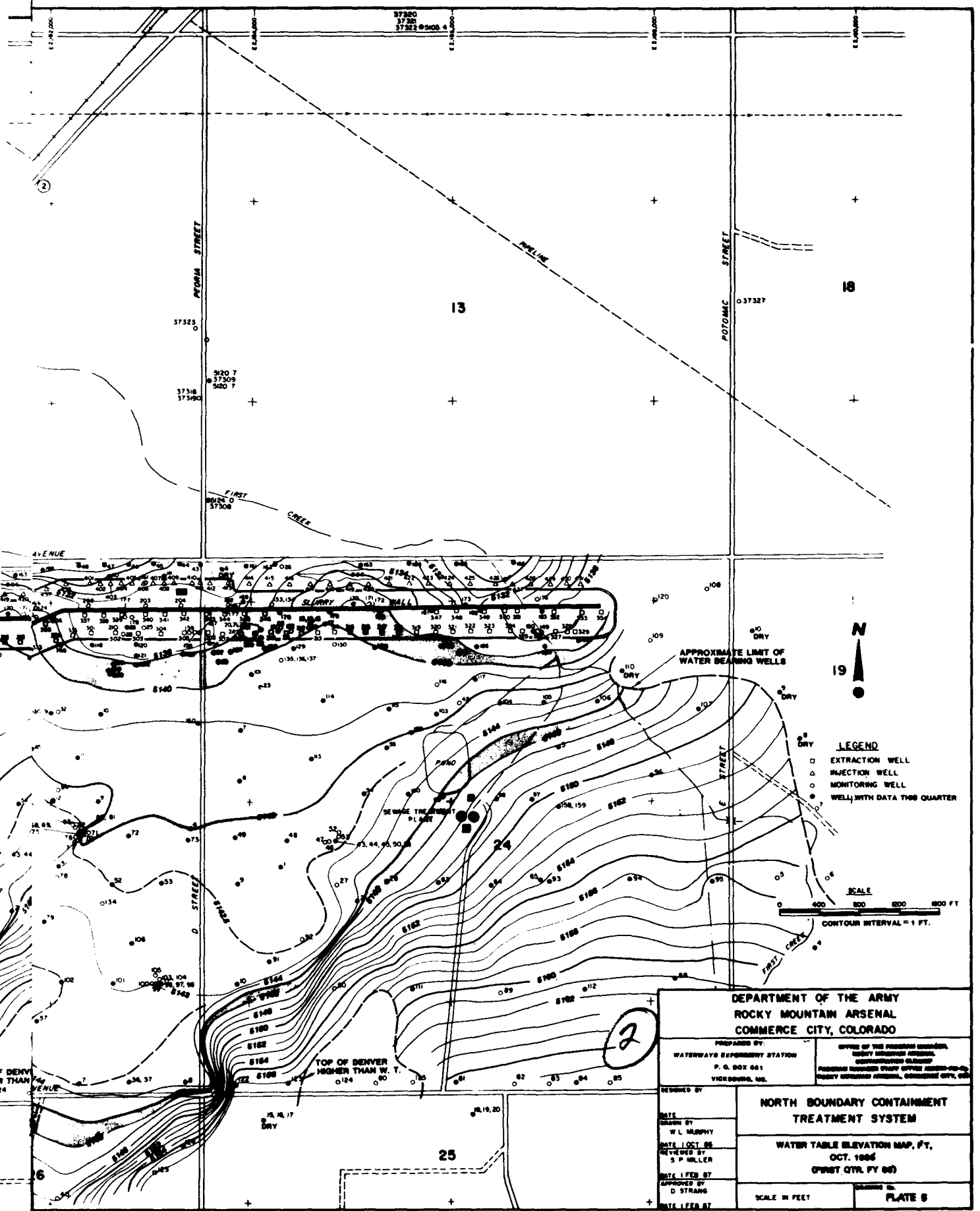

PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
96TH AVENUE
SLURRY WALL
APPROXIMATE LIMIT OF WATER BEARING WELLS
DRY
POND
TOP OF DENVER FORMATION
14
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELL
INJECTION WELL
MONITORING WELL
WELL WITH DATA THIS QUARTER
SCALE
0 400 800 1200 1600 FT
CONTOUR INTERVAL = 1 FT.
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY:
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
WATER TABLE ELEVATION MAP, FT.
APRIL-MAY 1985
(THIRD QTR FY 85)
DRAWN BY W. L. MURPHY
DATE OCT 85
REVIEWED BY S. P. MILLER
DATE FEB 87
APPROVED BY D. STRANG
DATE FEB 87
SCALE IN FEET
PLATE-3

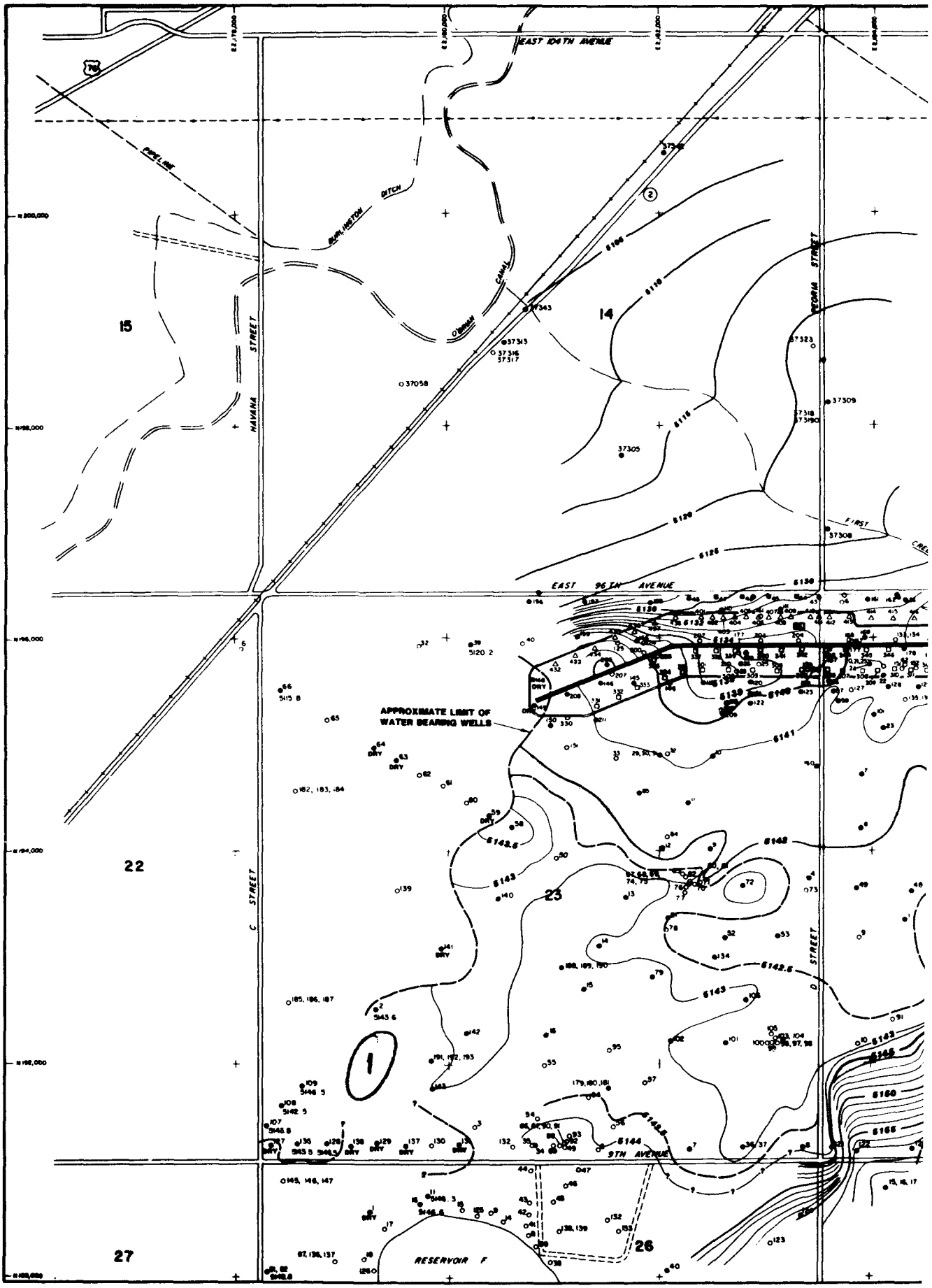

EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
15
14
22
23
27
26
EAST 96TH AVENUE
APPROXIMATE LIMIT OF WATER BEARING WELLS
C STREET
O STREET
FIRST CREEK
SLURRY
DRY
RESERVOIR F
9TH AVENUE

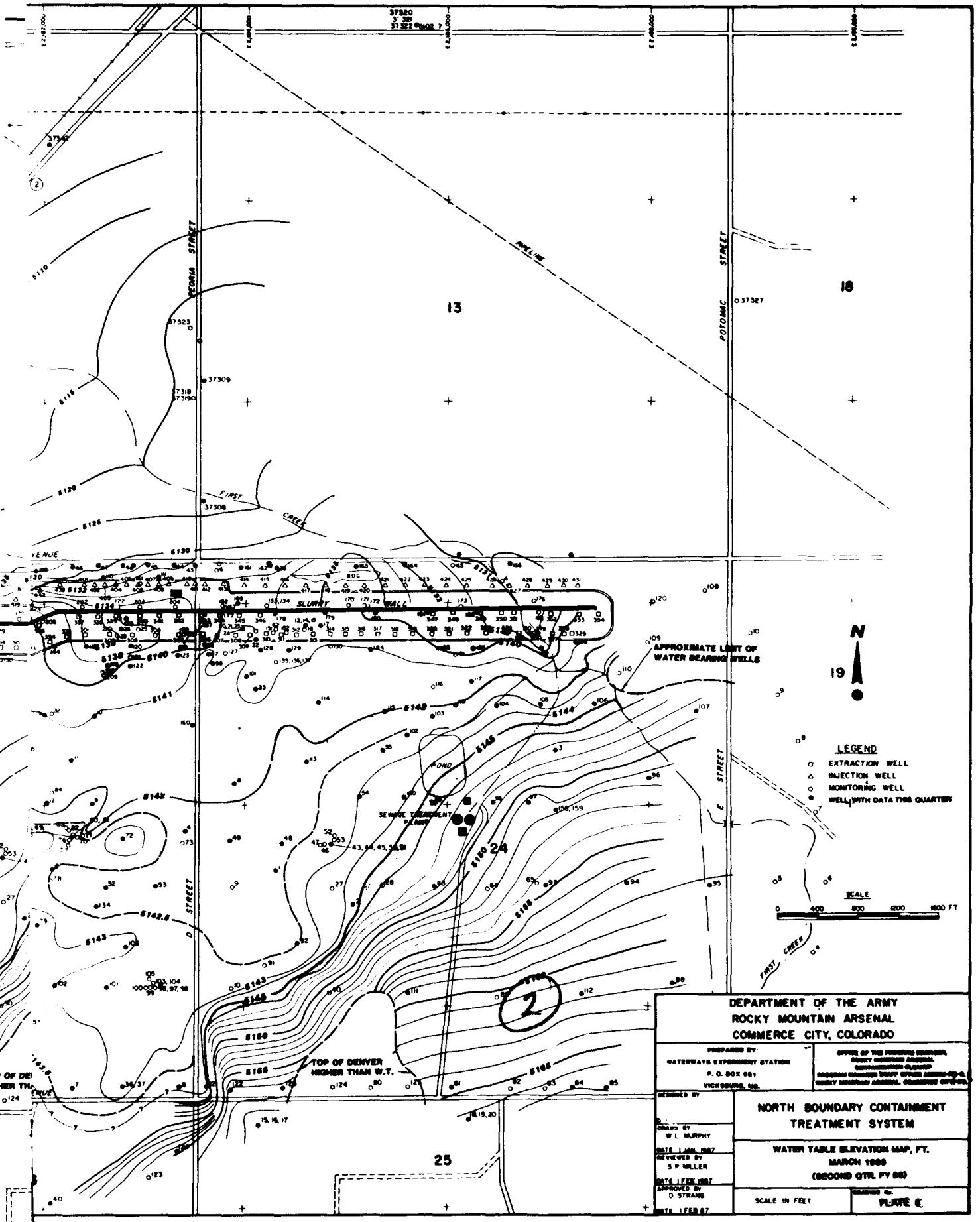

PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
APPROXIMATE LIMIT OF WATER BEARING WELLS
POND
SEWAGE TREATMENT PLANT
TOP OF DENVER HIGHER THAN W. T.
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELL
INJECTION WELL
MONITORING WELL
WELL WITH DATA THIS QUARTER
SCALE
0 400 800 1200 1600 FT
CONTOUR INTERVAL = 1 FT.
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DATE
DRAWN BY
W L MURPHY
DATE 1 OCT 86
REVIEWED BY
S P MILLER
DATE 1 FEB 87
APPROVED BY
D STRANG
DATE 1 FEB 87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
WATER TABLE ELEVATION MAP, FT.
JULY 1986
(FOURTH QTR, FY 86)
SCALE IN FEET
PLATE 4.

MANUFACTURED TO AIIM STANDARDS
BY APPLIED IMAGE, INC.




PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
APPROXIMATE LIMIT OF WATER BEARING WELLS
POND
SEWAGE TREATMENT PLANT
TOP OF DENVER HIGHER THAN W. T.
13
18
19
24
25
N
LEGEND
EXTRACTION WELL
INJECTION WELL
MONITORING WELL
WELL WITH DATA THIS QUARTER
SCALE
0 400 800 1200 1600 FT
CONTOUR INTERVAL = 1 FT.
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY:
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM
WATER TABLE ELEVATION MAP, FT,
OCT. 1986
(FIRST QTR. FY 87)
DESIGNED BY
DRAWN BY
W L MURPHY
REVIEWED BY
S P MILLER
APPROVED BY
D STRANG
SCALE IN FEET
PLATE 8


EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
APPROXIMATE LIMIT OF WATER BEARING WELLS
C STREET
D STREET
96TH AVENUE
RESERVOIR F
15
14
22
23
1
27
26
6
2



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY:
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

DESIGNED BY

DRAWN BY
W L MURPHY
DATE 1 JAN 1987

REVIEWED BY
S P MILLER
DATE 1 FEB 1987

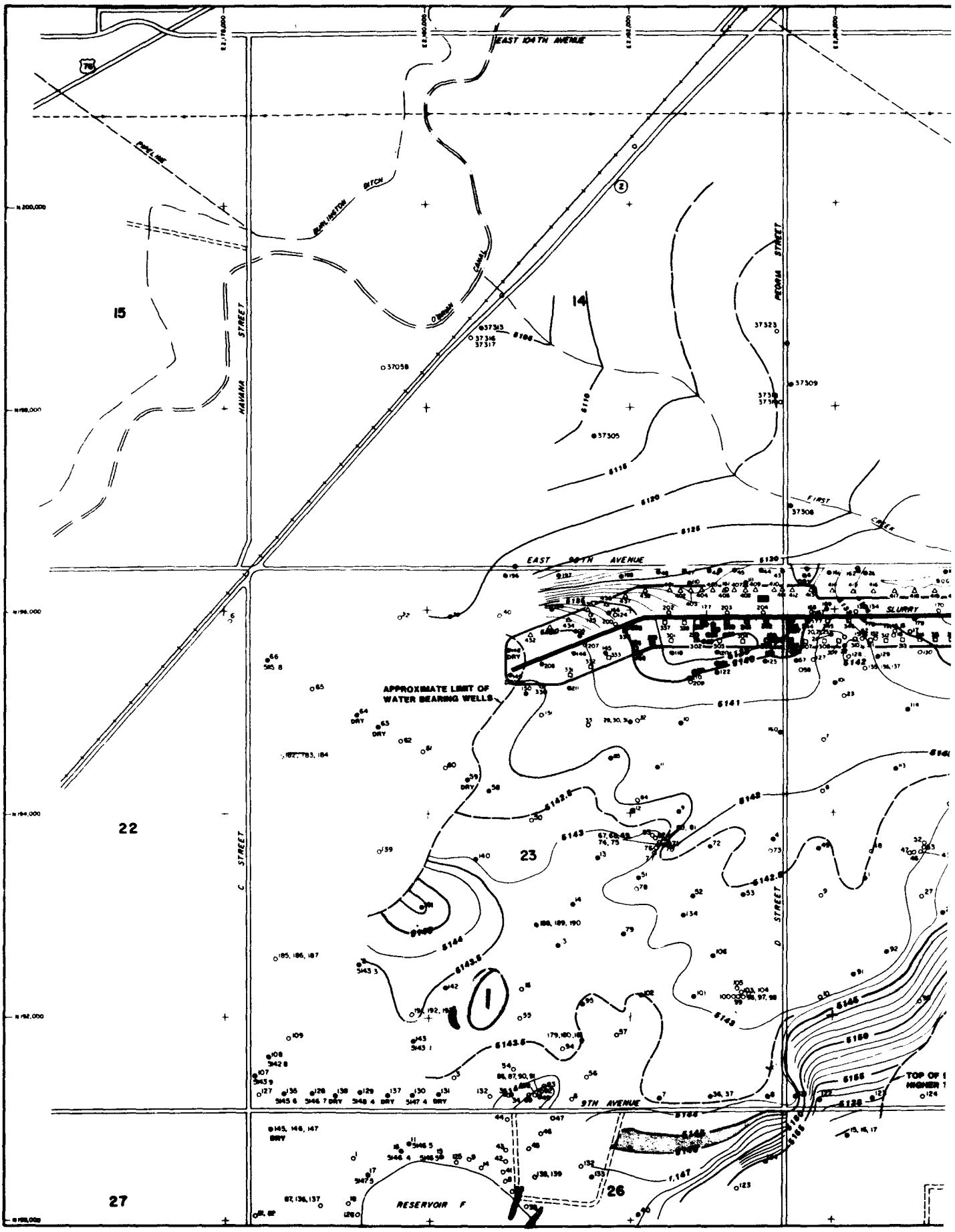
APPROVED BY
D STRANG
DATE 1 FEB 87

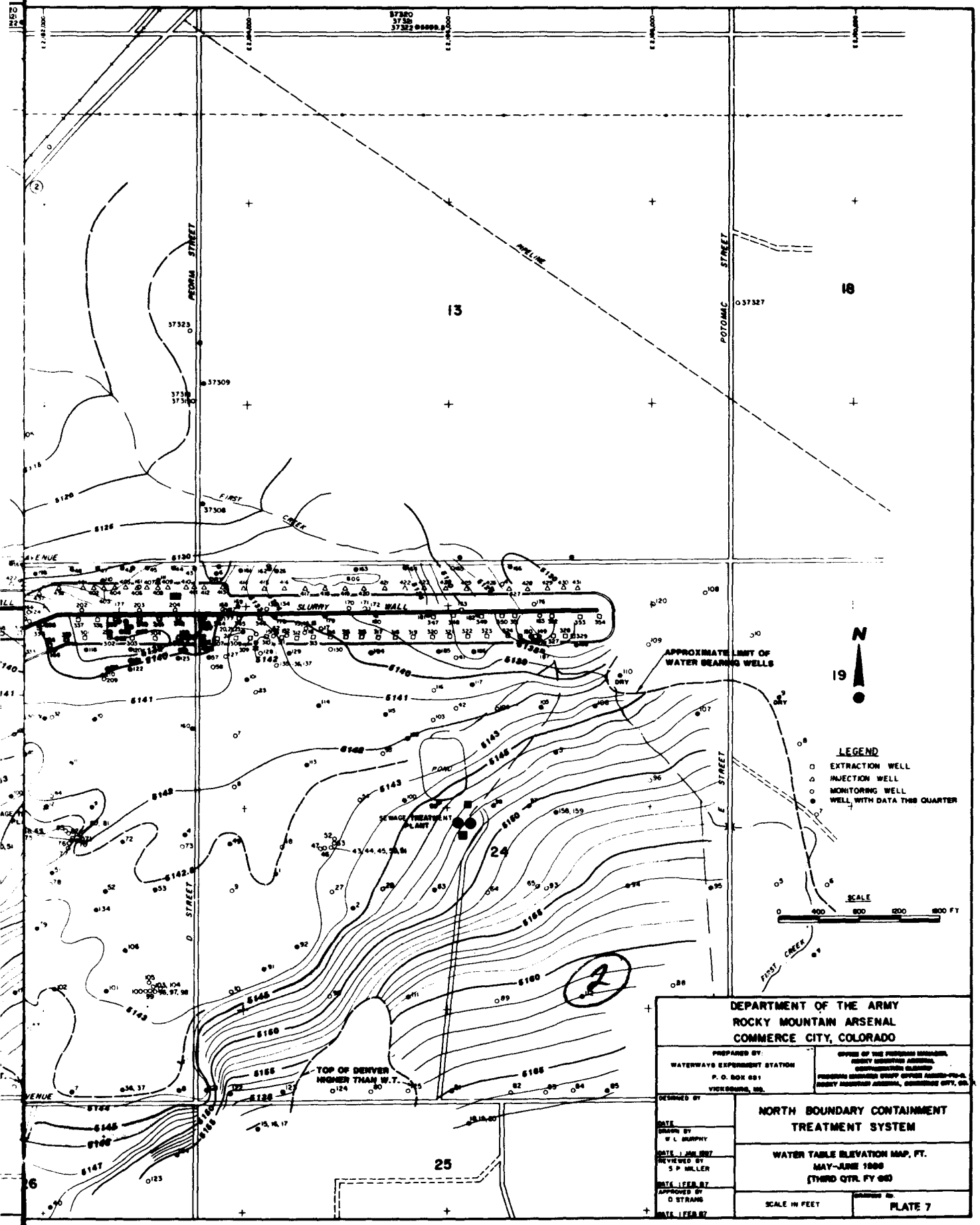
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

WATER TABLE ELEVATION MAP, FT.
MARCH 1988
(SECOND QTR FY 88)

SCALE IN FEET

DRAWING NO.
PLATE 6


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
HAVANA STREET
PEORIA STREET
C STREET
D STREET
PIPELINE
BURLINGTON DITCH
O'BRIAN CANAL
FIRST CREEK
APPROXIMATE LIMIT OF WATER BEARING WELLS
SLURRY
RESERVOIR F
TOP OF
HIGHER
15
14
22
23
27
26
1
2



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MISS.

DESIGNED BY

DRAWN BY
W. L. MURPHY

REVIEWED BY
S. P. MILLER

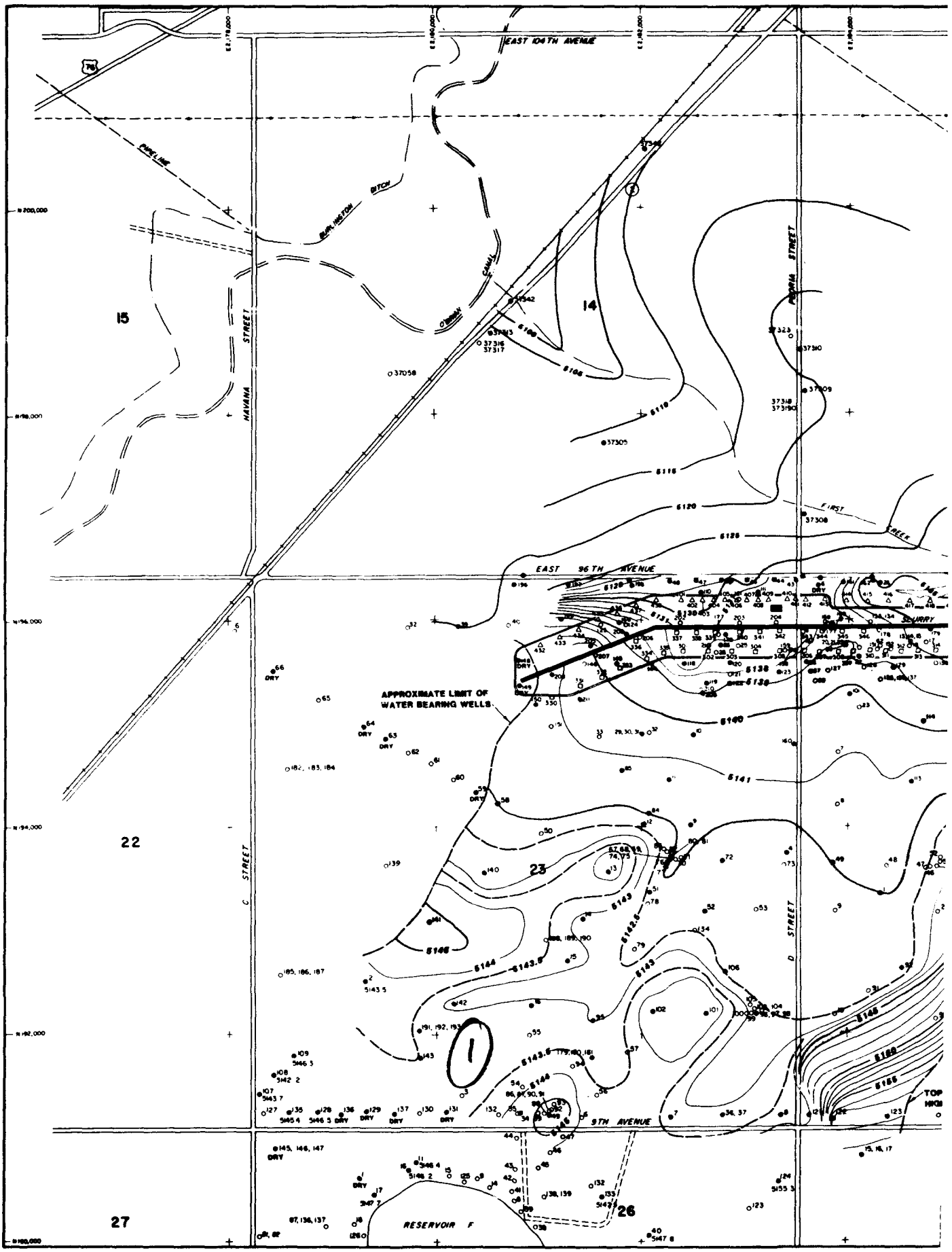
APPROVED BY
D. STRAUB

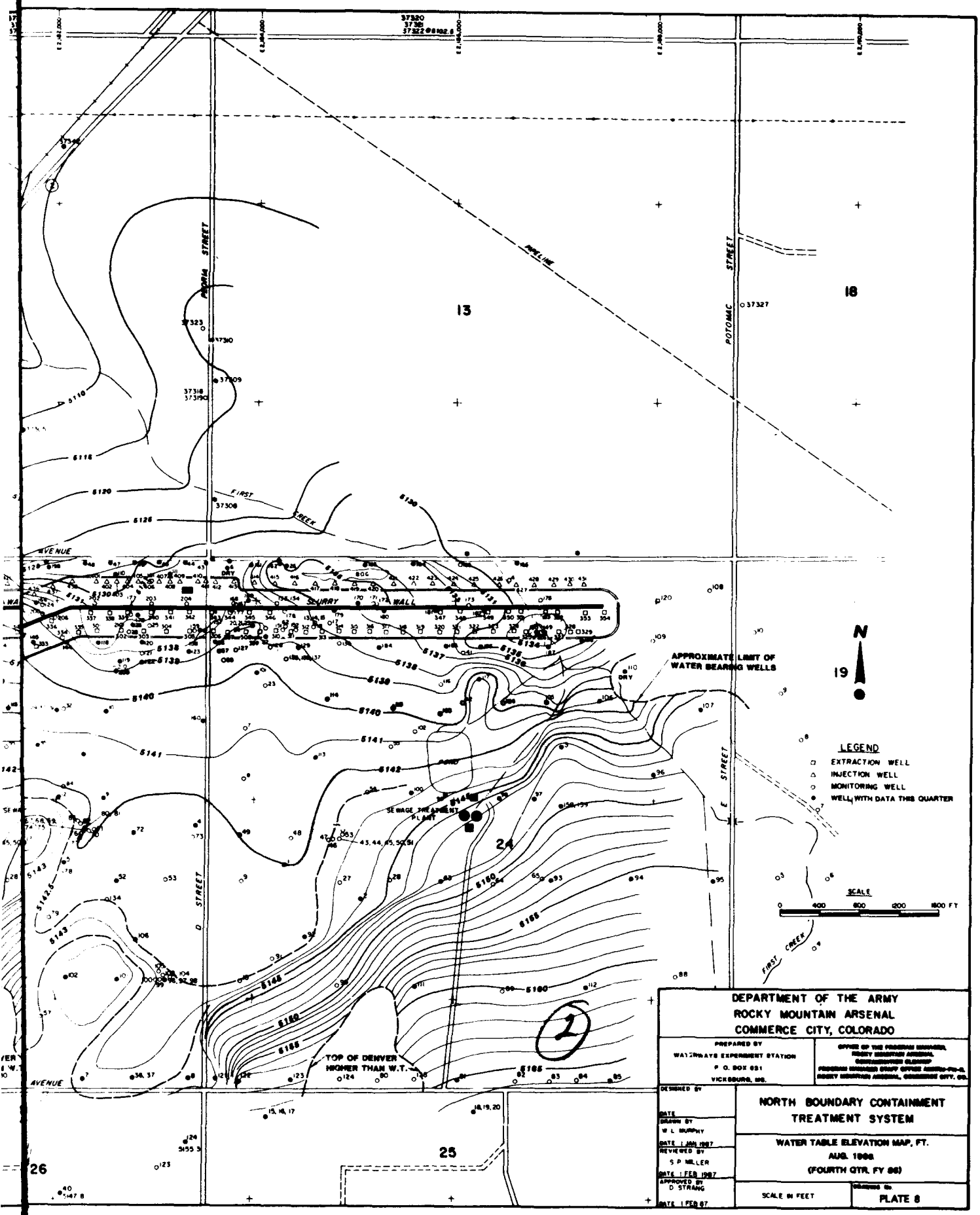
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

WATER TABLE ELEVATION MAP, FT.
MAY-JUNE 1986
(THIRD QTR. FY 86)

SCALE IN FEET

PLATE 7


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
PIPELINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
FIRST STREET
C STREET
D STREET
APPROXIMATE LIMIT OF WATER BEARING WELLS
RESERVOIR F
15
14
22
23
26
27
5140
5141
5142.5
5143
5143.5
5144
5145
5146
5148
5150
5155
5156
5158
5138
5139
DRY



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PROGRAM MANAGER DRAFT OFFICE ARMRM-PM-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

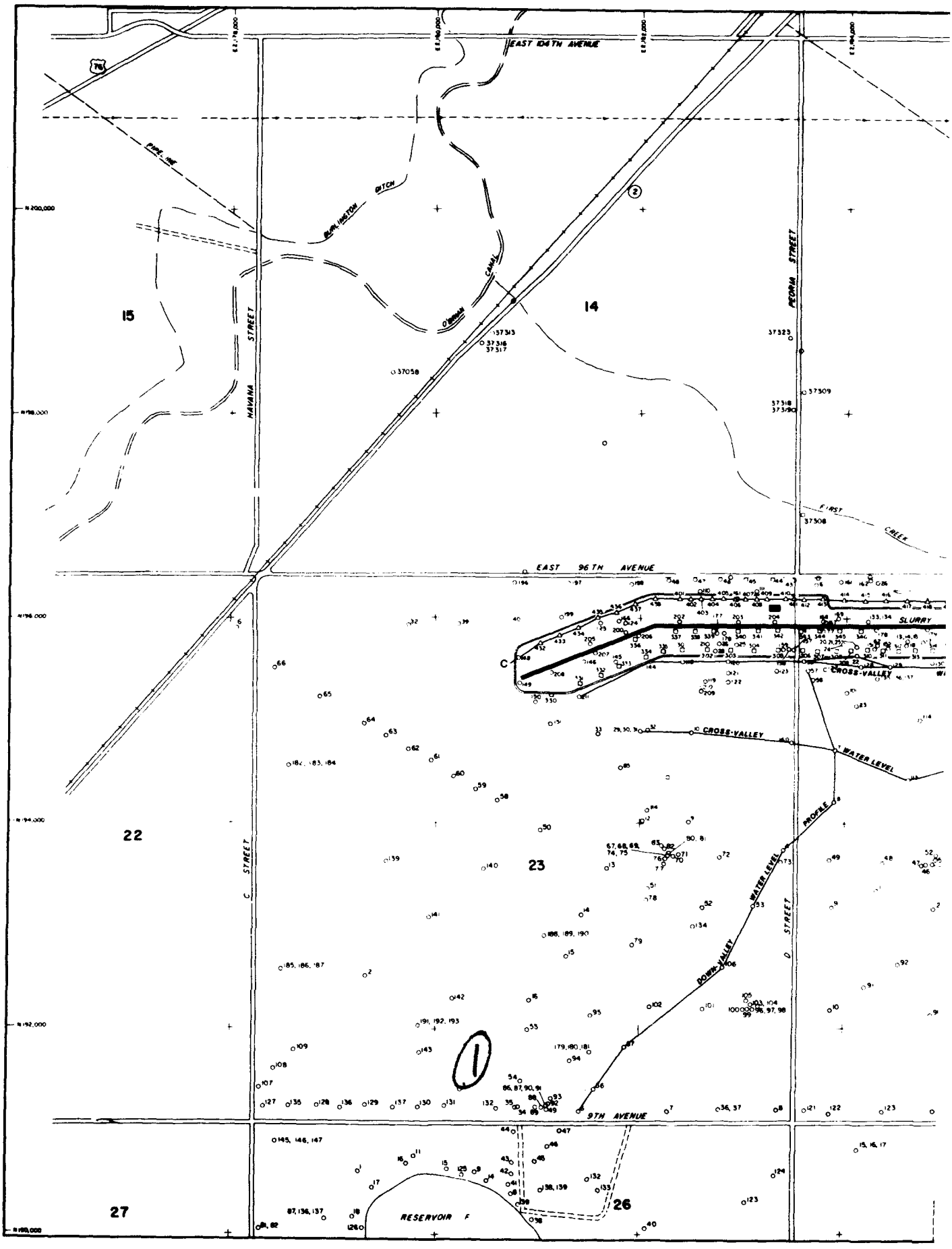
DESIGNED BY
DATE
DRAWN BY
W. L. MURPHY
DATE 1 JAN 1987
REVIEWED BY
S. P. MILLER
DATE 1 FEB 1987
APPROVED BY
D. STRANG
DATE 1 FEB 87

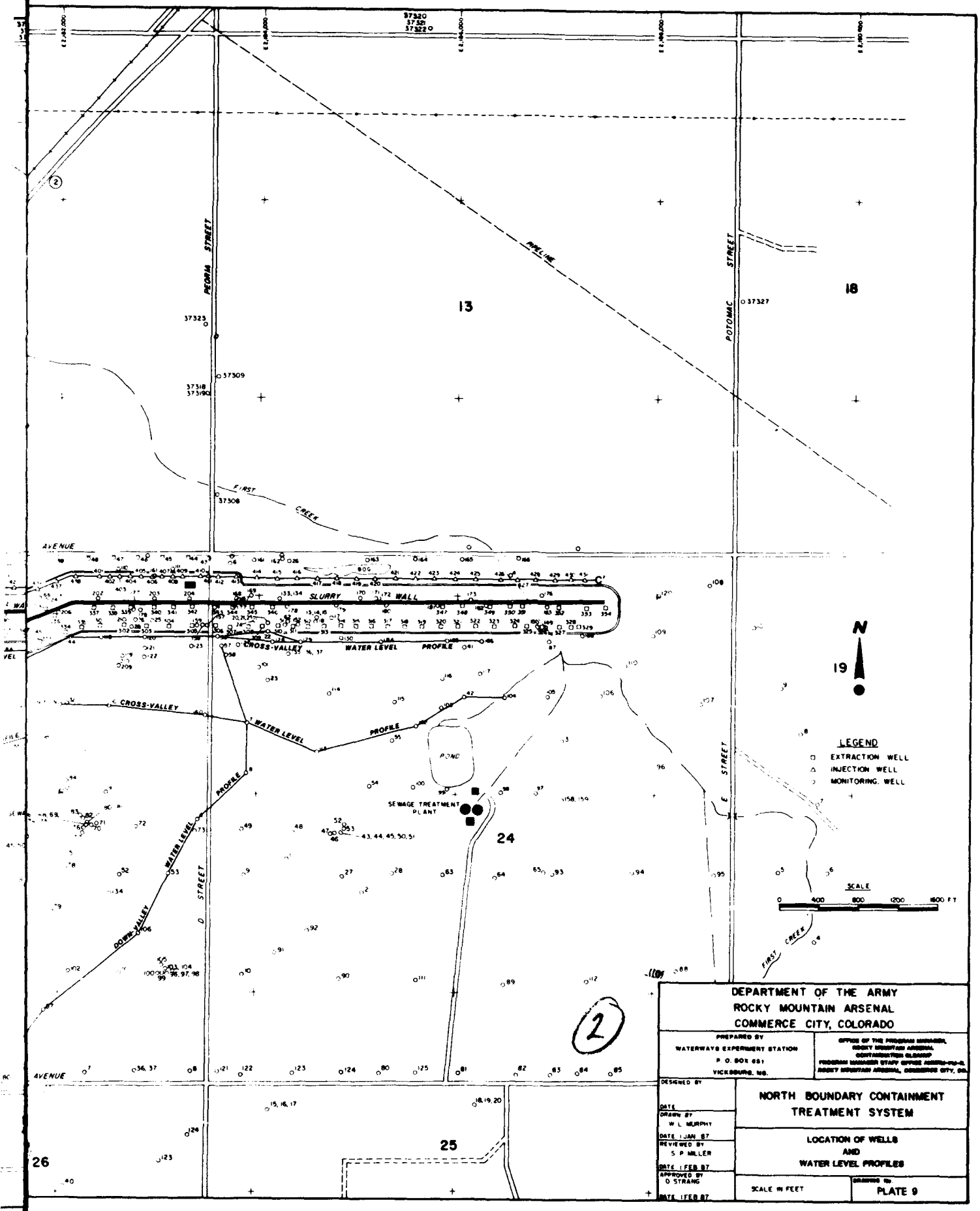
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

WATER TABLE ELEVATION MAP, FT.
AUG. 1986
(FOURTH QTR. FY 86)

SCALE IN FEET

DRAWING NO.
PLATE 8


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
C STREET
D STREET
FIRST CREEK
SLURRY
CROSS-VALLEY
WATER LEVEL
PROFILE
DOWN VALLEY
RESERVOIR F
15
14
22
23
26
27
1
2
37343
37316
37317
37058
37323
37309
37318
37390
37308



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER, ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ATTN: DRXRM-CM-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

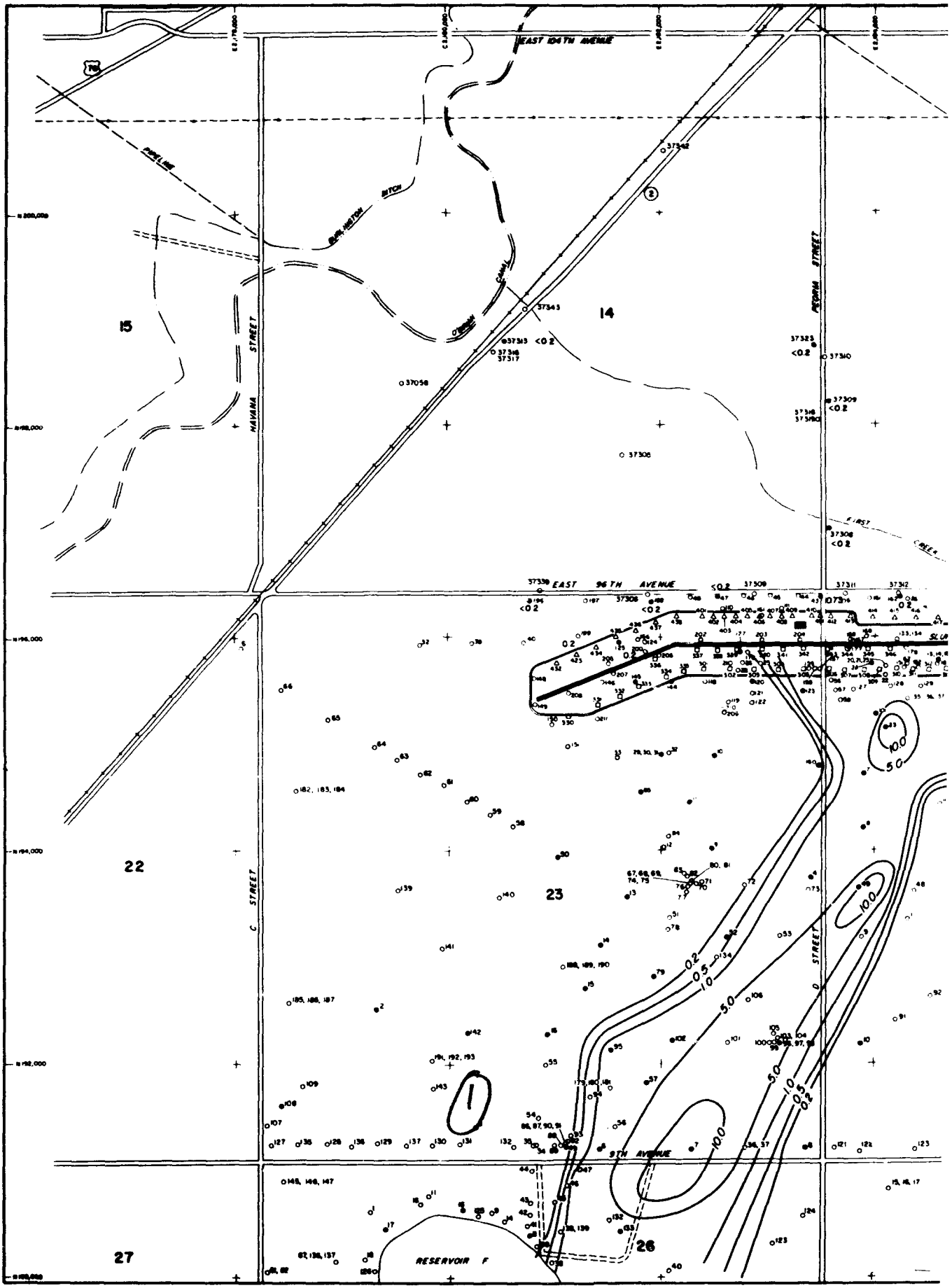
DESIGNED BY
DATE
DRAWN BY W. L. MURPHY
DATE 1 JAN 87
REVIEWED BY S. P. MILLER
DATE 1 FEB 87
APPROVED BY D. STRANG
DATE 1 FEB 87

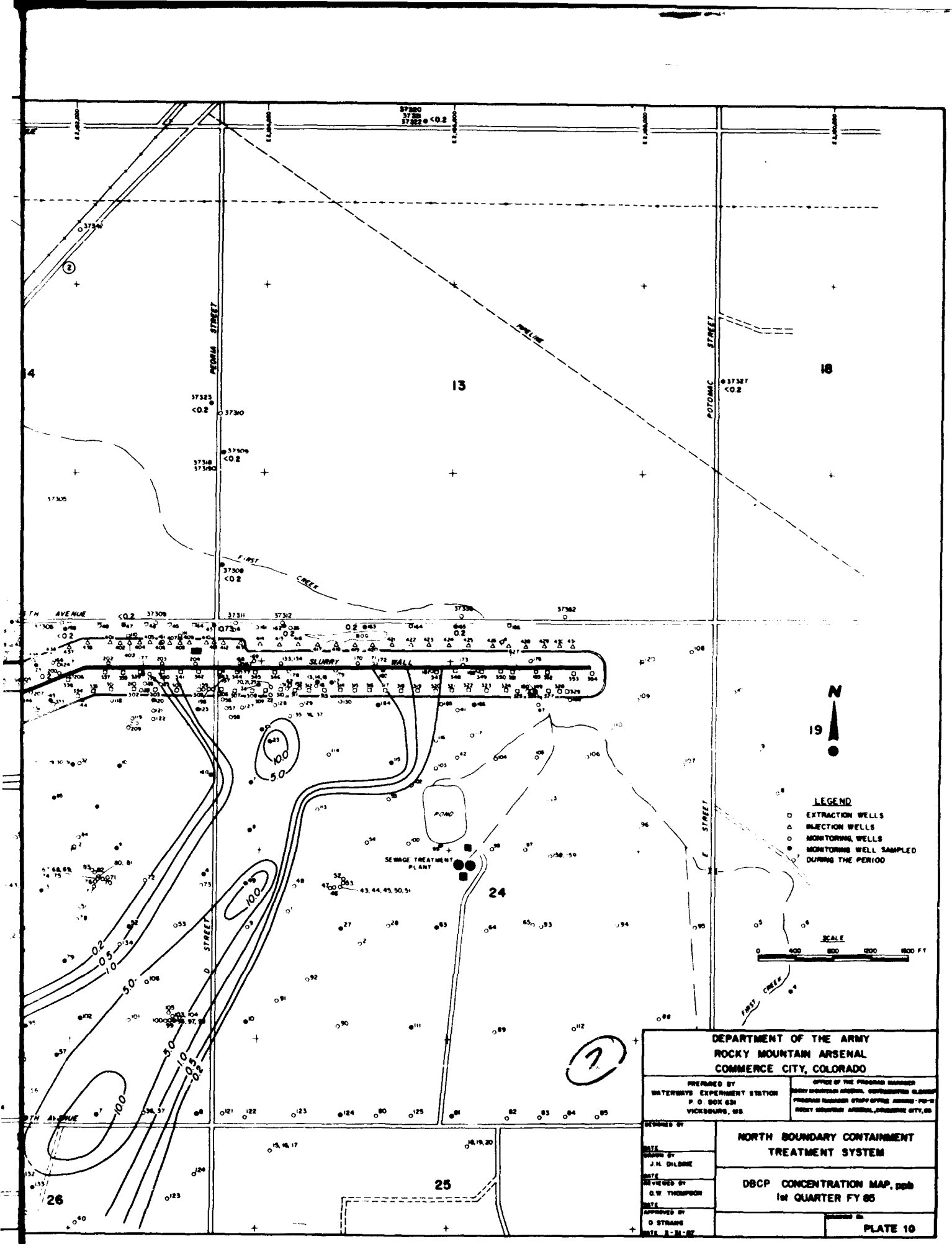
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

LOCATION OF WELLS AND WATER LEVEL PROFILES

SCALE IN FEET

DRAWING NO. PLATE 9


EAST 104TH AVENUE
PIPE LINE
HIGH LINE DITCH
CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
C STREET
D STREET
96TH AVENUE
RESERVOIR F
15
14
22
23
27
26
37342
37343
37345
37346
37347
37058
37306
37308
37309
37310
37311
37312
37339
37340
<0.2
0.2
0.5
1.0
5.0
10.0
100.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS

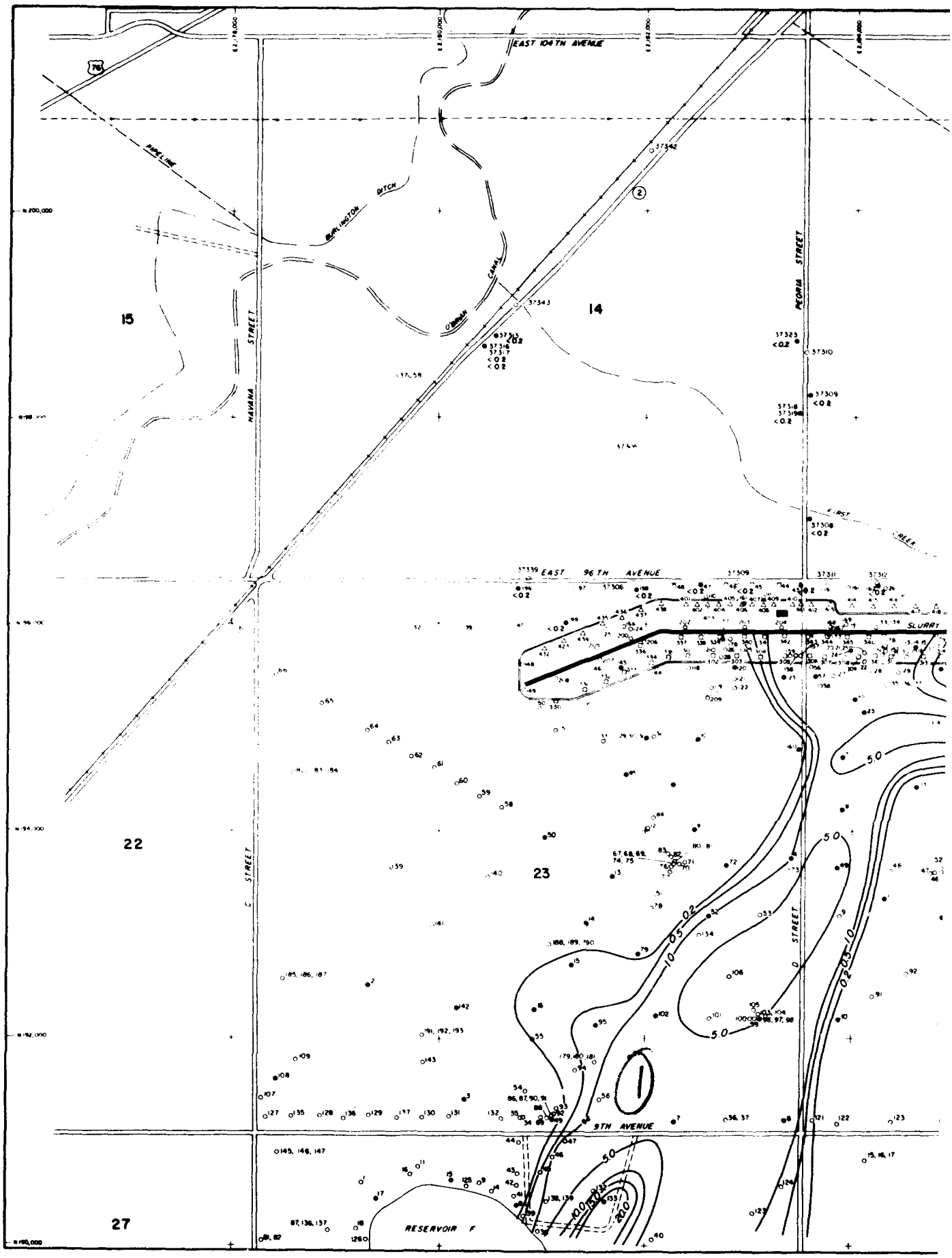
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
PROGRAM MANAGER STAFF OFFICE ADDRESS: PM-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

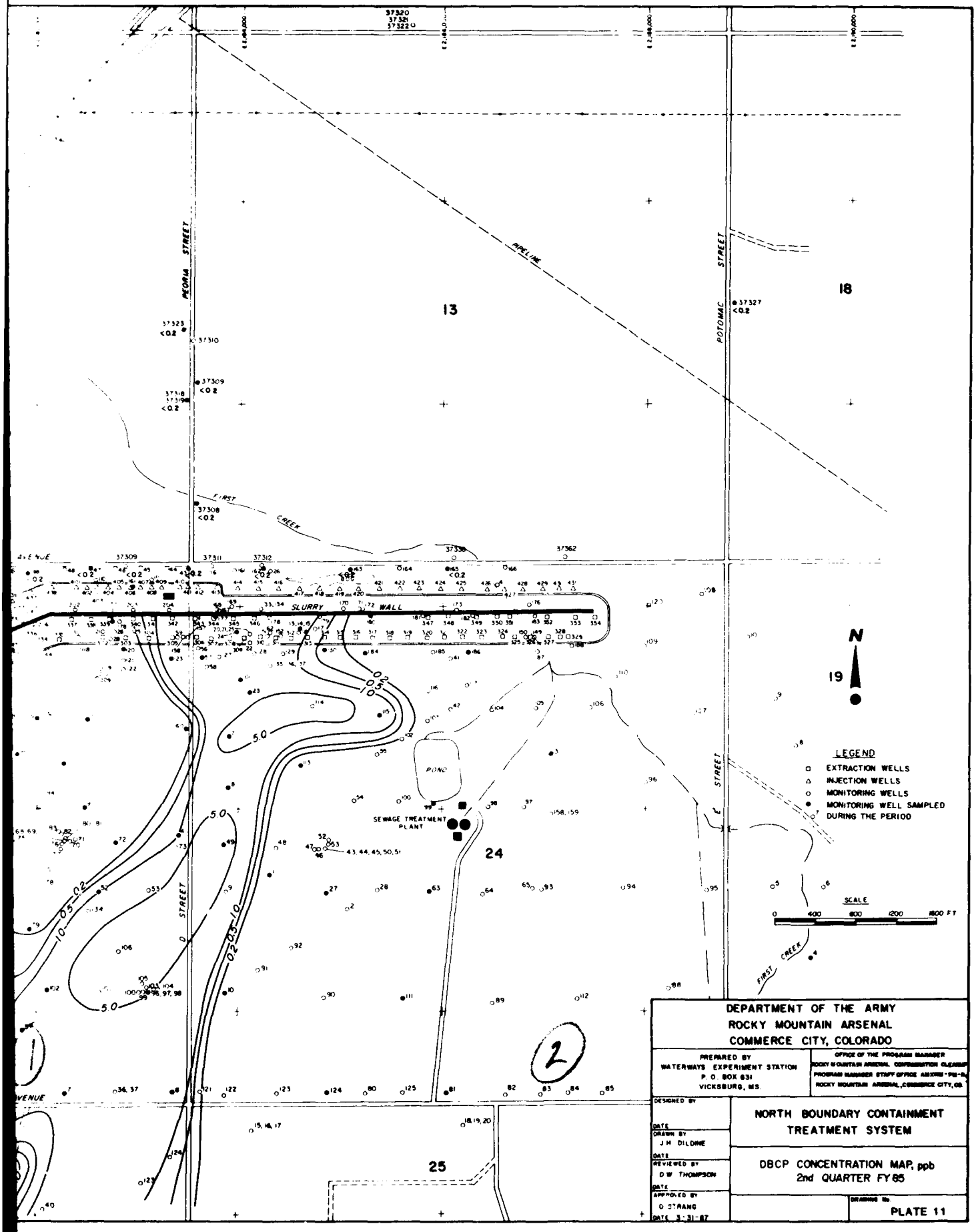
DESIGNED BY
DATE
DRAWN BY J.H. DILORIE
DATE
REVIEWED BY O.W. THOMPSON
DATE
APPROVED BY D. STRAHS
DATE 3-14-85

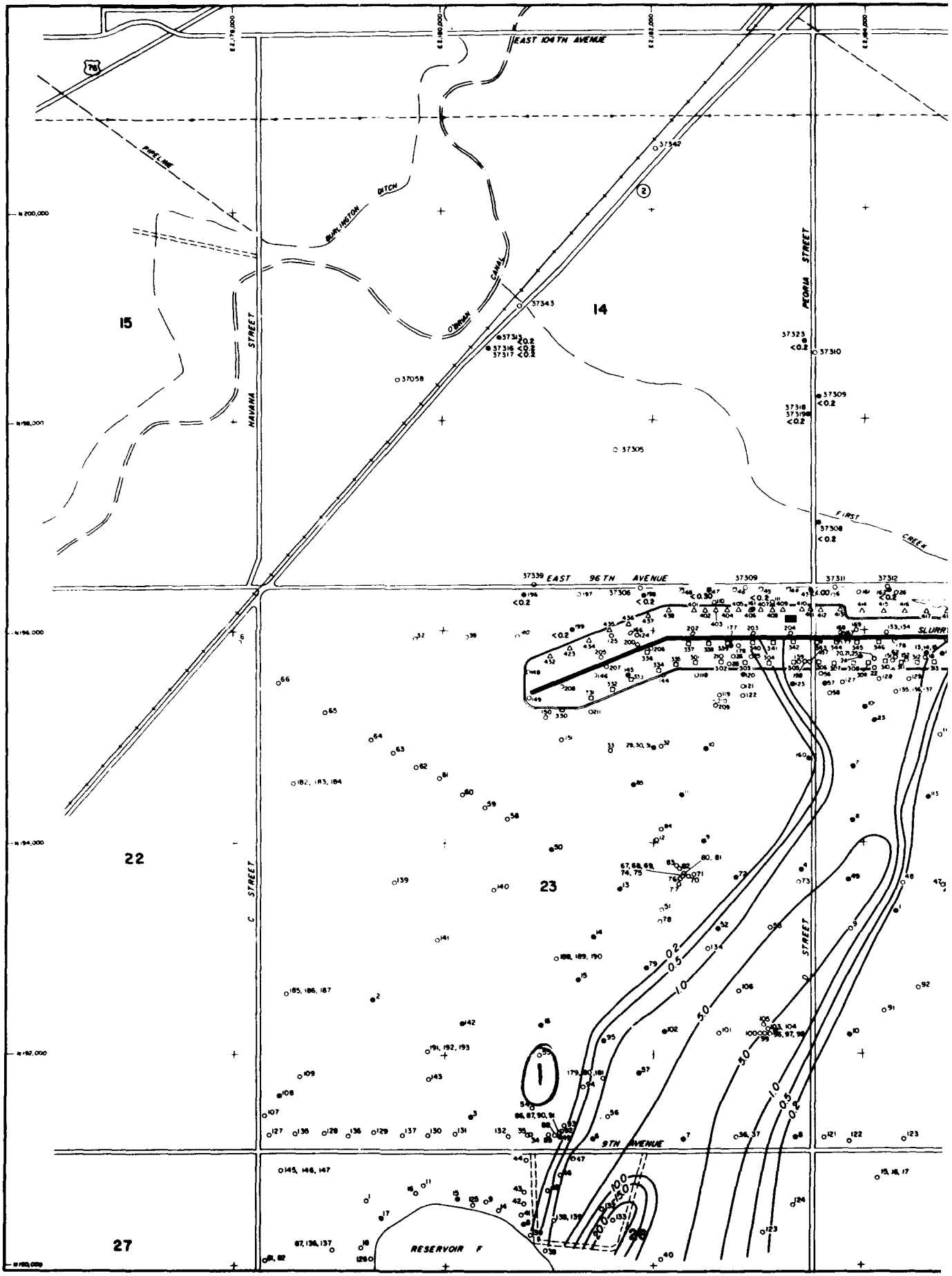
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

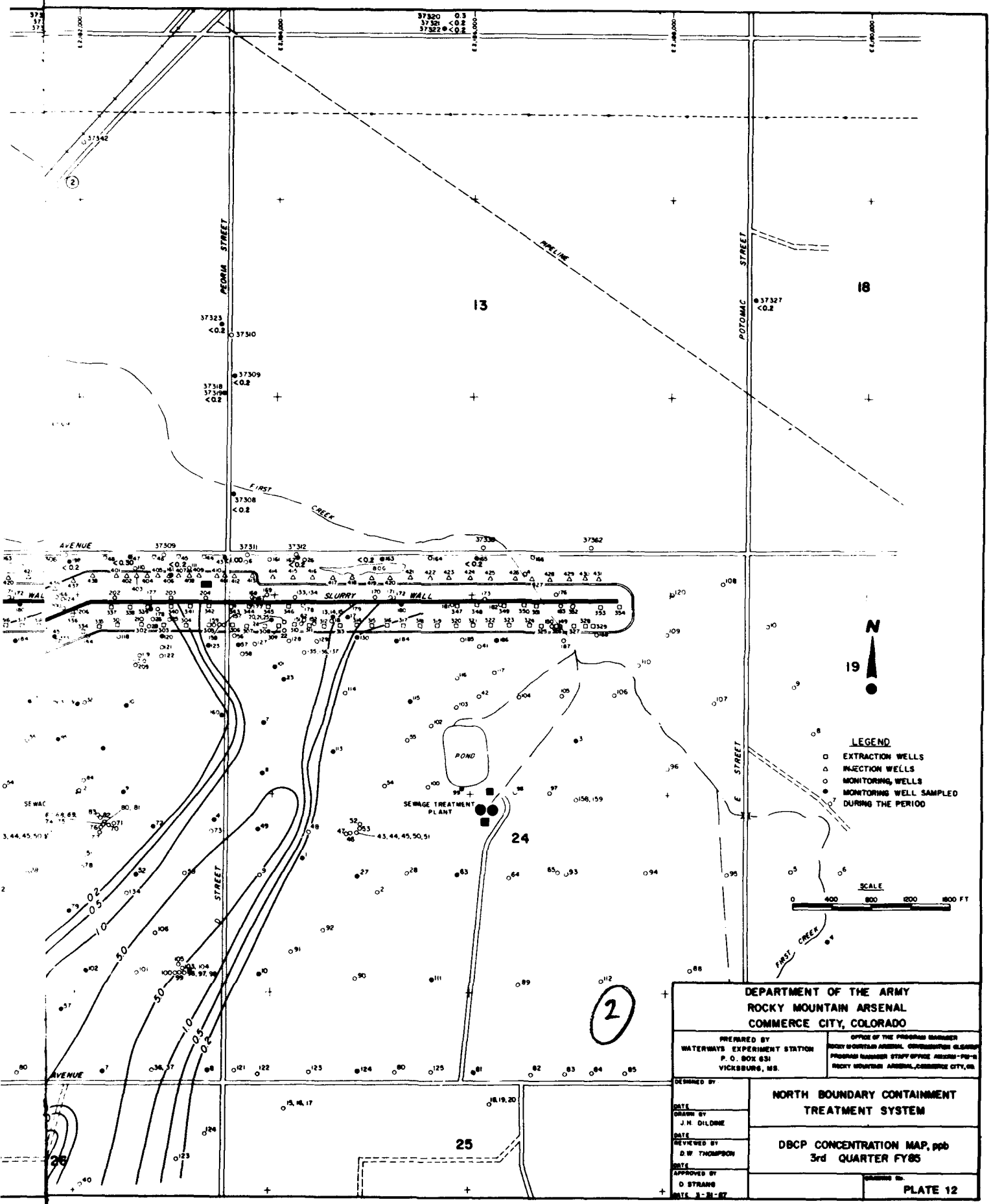
DBCP CONCENTRATION MAP, ppb
1st QUARTER FY 85

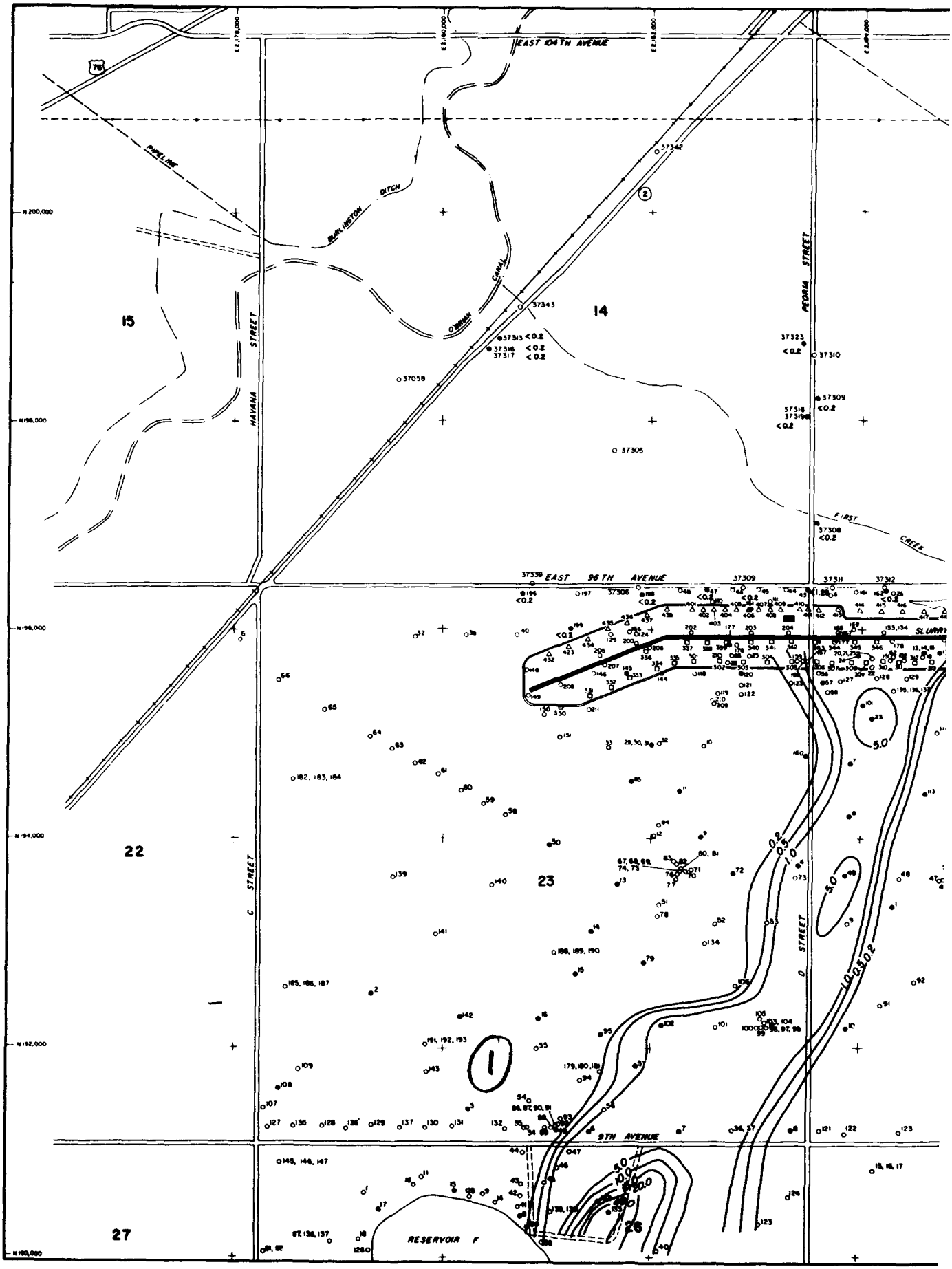
DRAWING NO.
PLATE 10

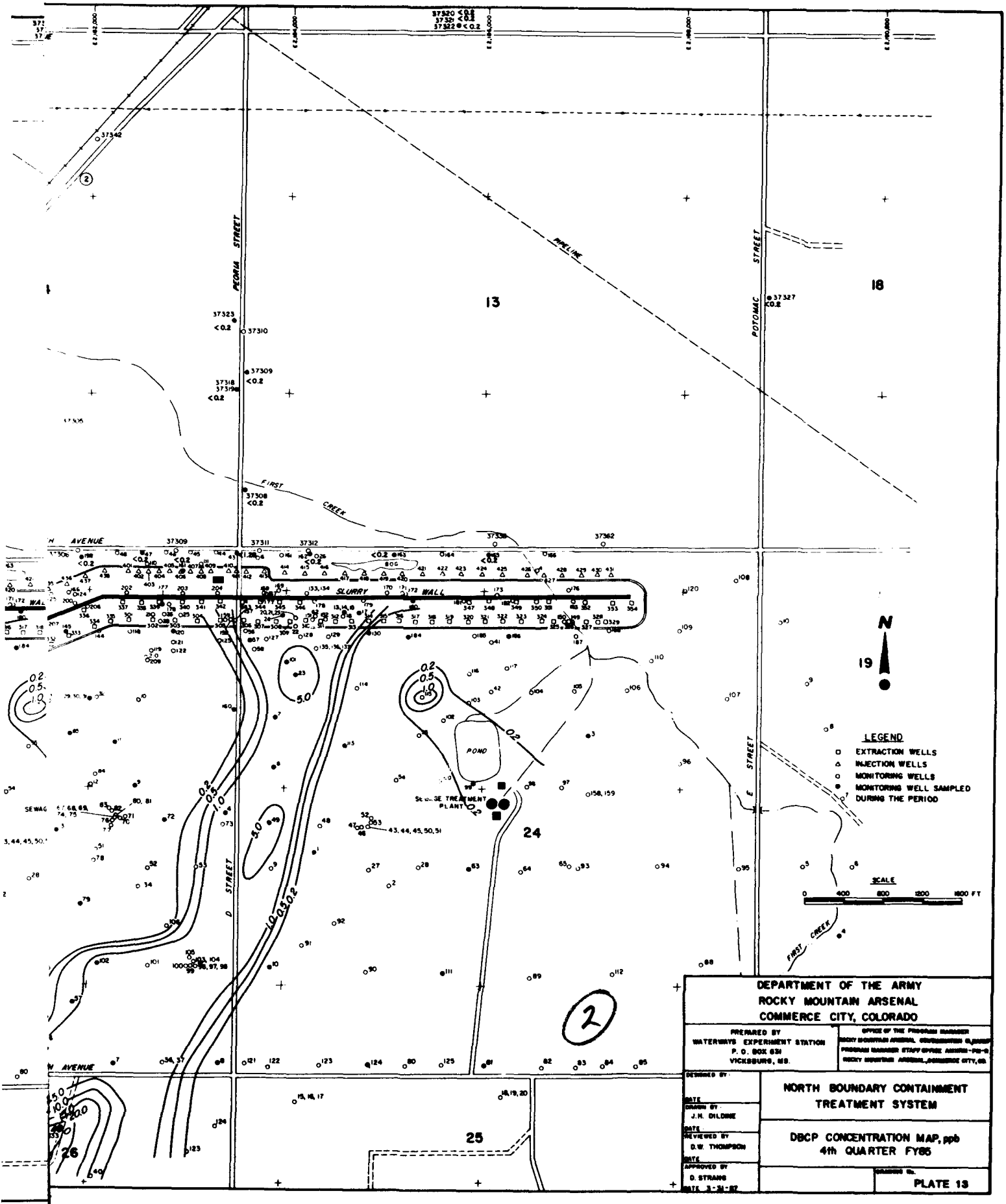

EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
PEORIA STREET
HAVANA STREET
BURLINGTON DITCH
O'BRIAN CANAL
SLURRY
RESERVOIR F
15
14
22
23
27
5.0
1.0
0.5
0.2


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ARSENAL - PM-O
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
DESIGNED BY
DATE
DRAWN BY
J H DILORNE
DATE
REVIEWED BY
D W THOMPSON
DATE
APPROVED BY
D STRANG
DATE 3-31-87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DBCP CONCENTRATION MAP, ppb
2nd QUARTER FY 85
DRAWING No.
PLATE 11


EAST 104TH AVENUE
EAST 96TH AVENUE
96TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
C STREET
FIRST CREEK
SLURRY
RESERVOIR F
15
14
22
23
27
37342
37343
37058
37305
37310
37308
37339
37306
37309
37311
37312
37323
37316
37317
37318
37319
< 0.2
0.2
0.5
1.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
70.0
75.0
80.0
85.0
90.0
95.0
100.0


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ARSENAL-PQ-R
ROCKY MOUNTAIN ARSENAL/COMMERCE CITY, CO.
DESIGNED BY
DATE
DRAWN BY
J.M. DILORNE
DATE
REVIEWED BY
D.W. THOMPSON
DATE
APPROVED BY
D. STRANG
DATE 3-31-87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DBCP CONCENTRATION MAP, ppb
3rd QUARTER FY85
DRAWING NO.
PLATE 12


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
O STREET
BURLINGTON DITCH
O'BRIAN CANAL
FIRST CREEK
PIPELINE
RESERVOIR F
SLURRY
15
14
22
23
26
27
1
2
5.0
1.0
0.5
0.2



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

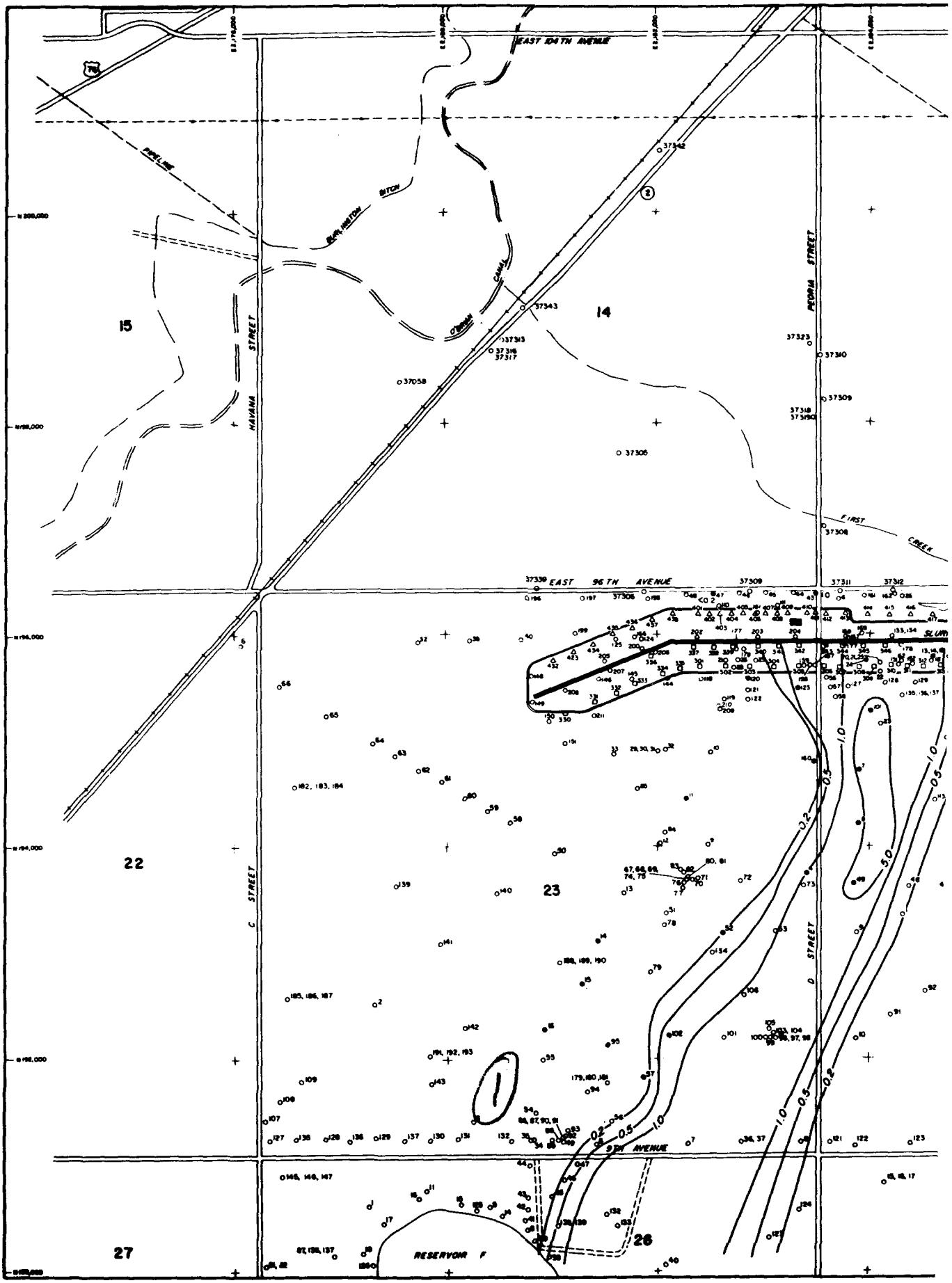
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, REMEDIATION PLANNING
PROGRAM MANAGER STAFF OFFICE ARMISTEAD-FOX-O
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

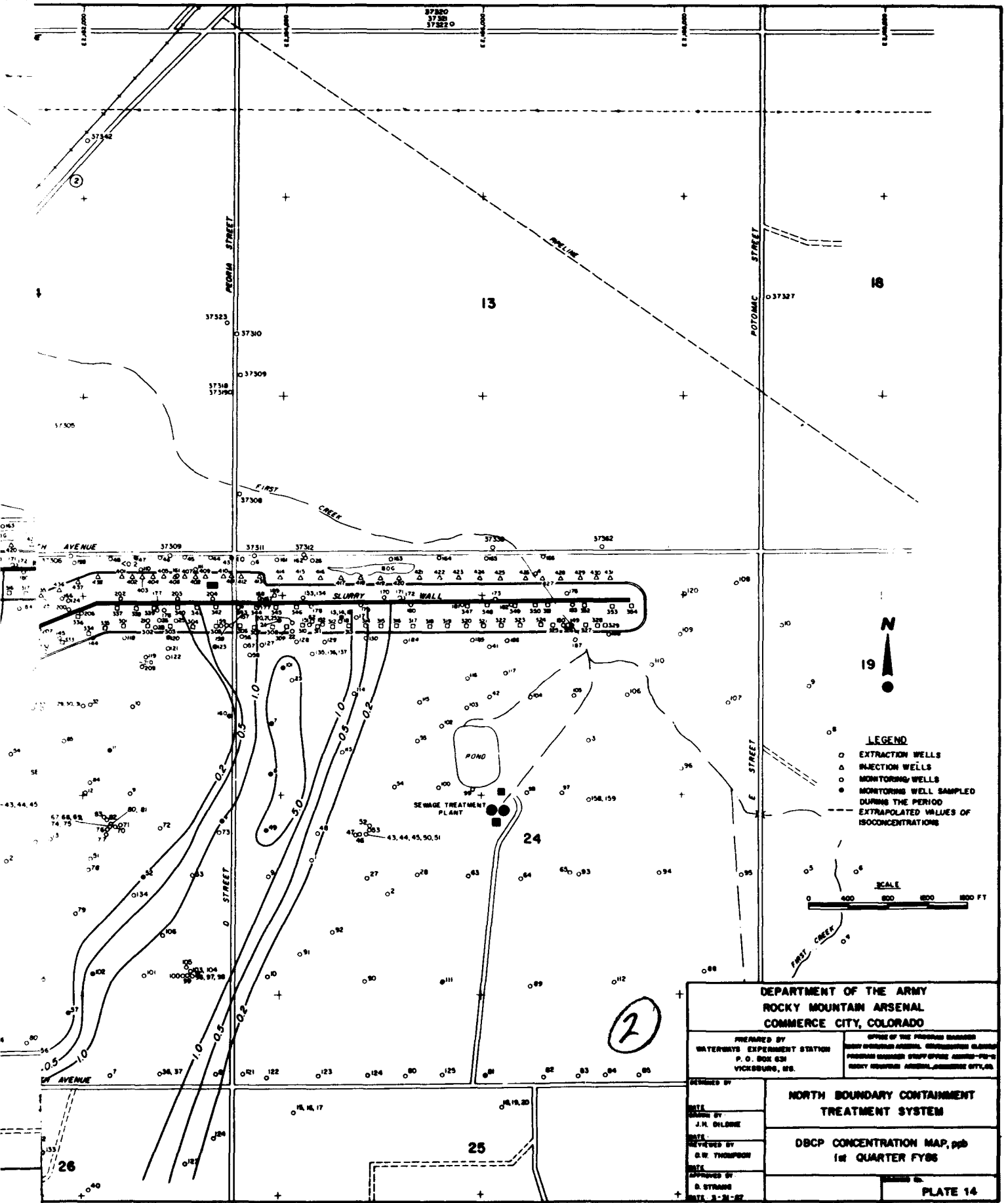
DESIGNED BY:
DATE
DRAWN BY: J.H. DILDINE
DATE
REVIEWED BY: D.W. THOMPSON
DATE
APPROVED BY: D. STRANG
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

DBCP CONCENTRATION MAP, ppb
4th QUARTER FY86

DRAWING NO.
PLATE 13


EAST 104TH AVENUE
PIPELINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
C STREET
D STREET
EAST 96TH AVENUE
FIRST CREEK
SLUM
RESERVOIR F
15
14
22
23
26
27
37342
37343
37316
37317
37058
37306
37323
37340
37309
37318
37319
37308
37339
37311
37312
1.0
0.5
0.2



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

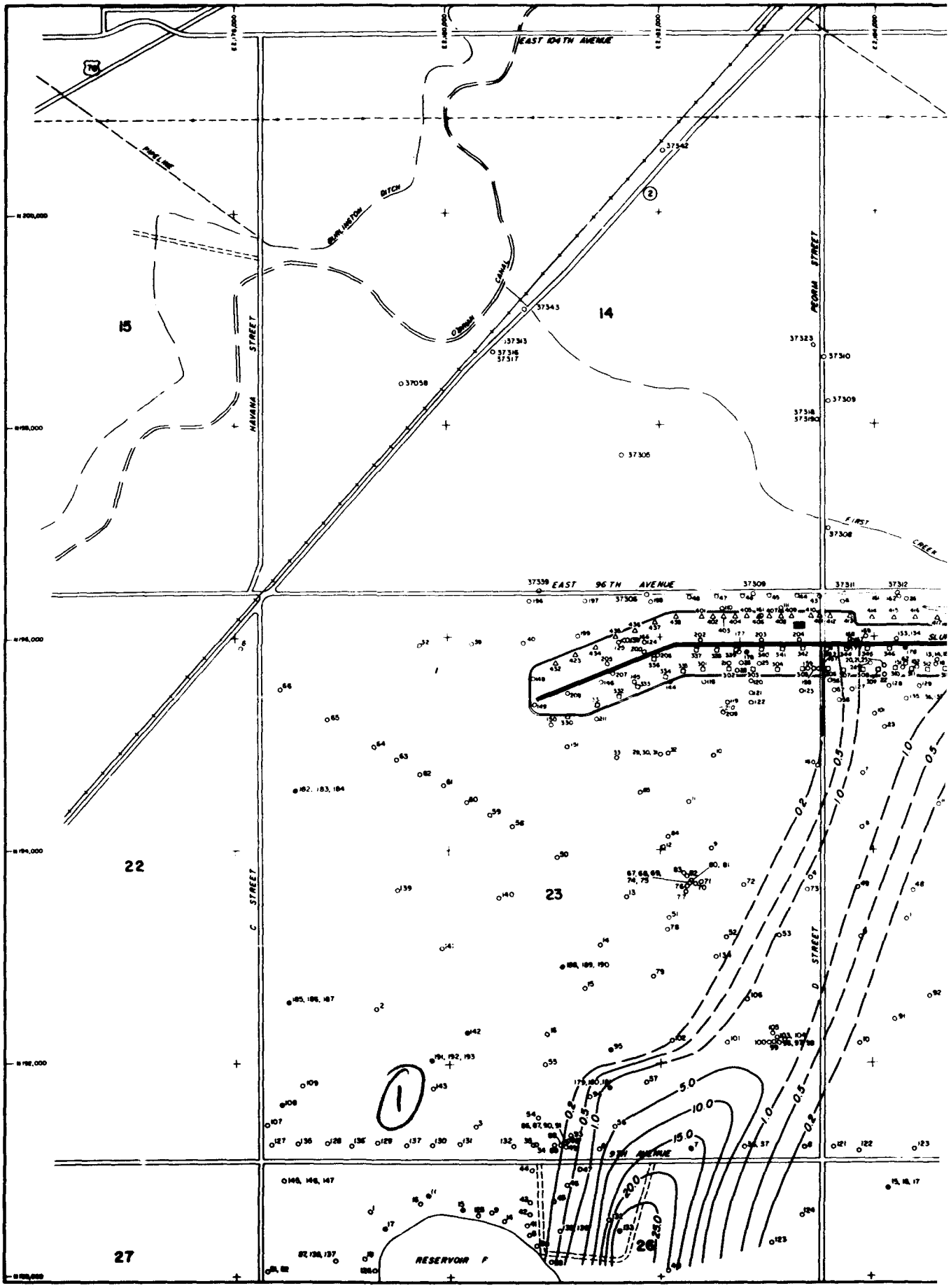
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

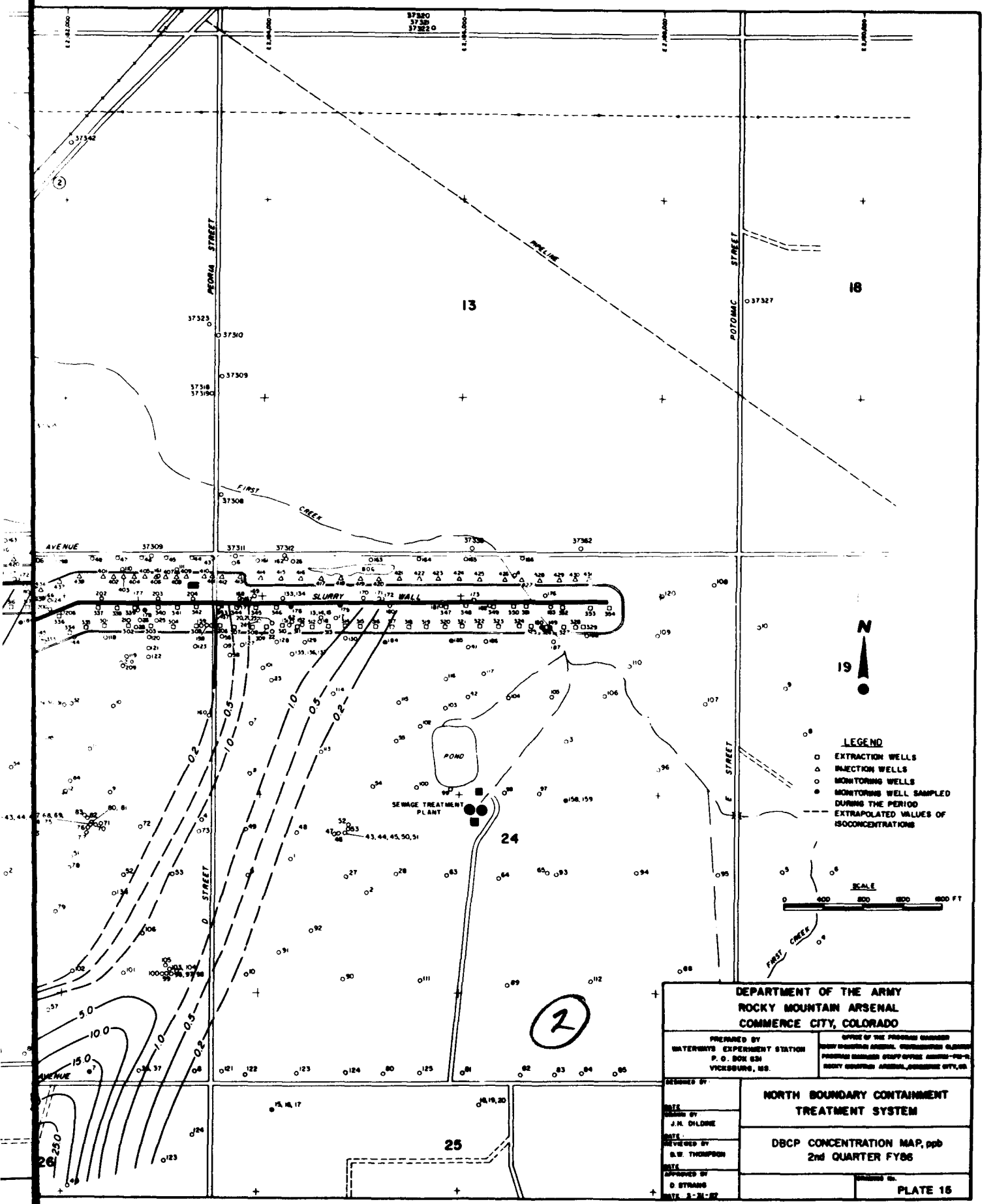
DESIGNED BY
DATE
DRAWN BY J.R. GILBERT
DATE
REVIEWED BY G.W. THOMPSON
DATE
APPROVED BY D. STRAUB
DATE 3-31-82

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

DBCP CONCENTRATION MAP, ppb
1st QUARTER FY86

PLATE 14


EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
C STREET
D STREET
96TH AVENUE
RESERVOIR F
15
14
22
23
27
26
1
37342
37343
37316
37317
37058
37305
37323
37340
37309
37318
37319
37308
37339
37306
37309
37311
37312
5.0
10.0
15.0
20.0
25.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

DESIGNED BY

DRAWN BY
J.N. DILORIE

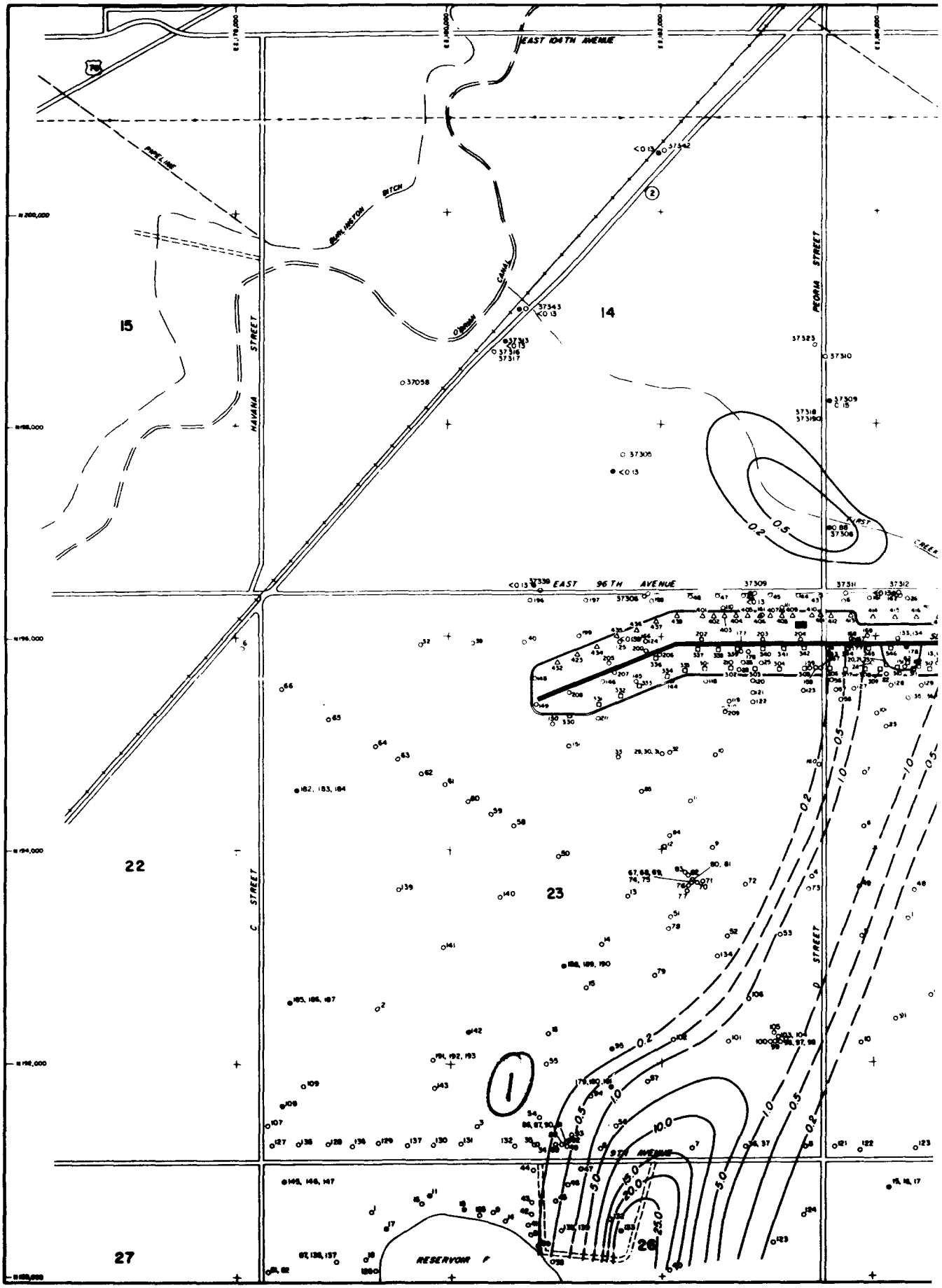
REVIEWED BY
B.W. THOMPSON

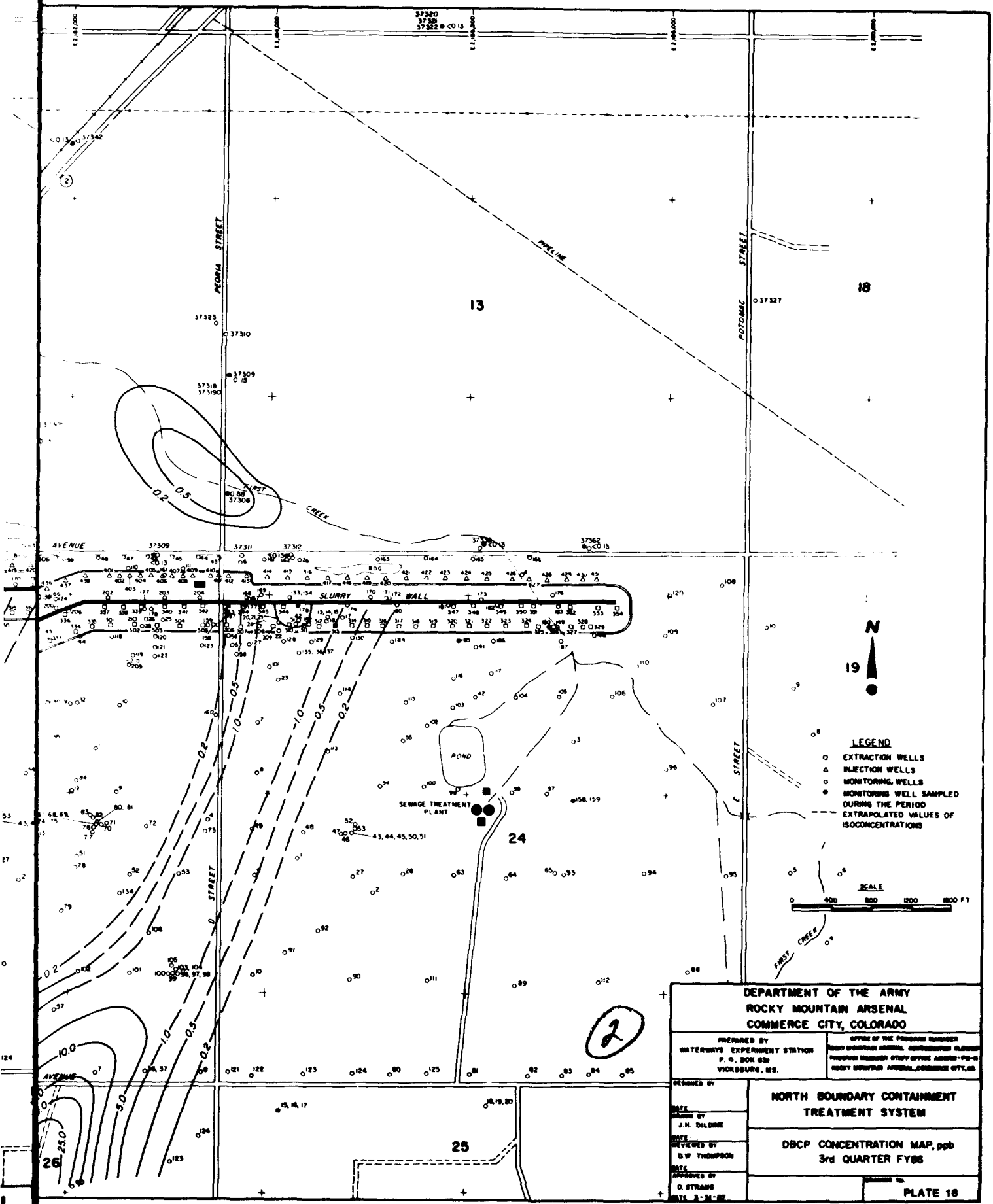
APPROVED BY
D STRAUB
DATE 3-31-87

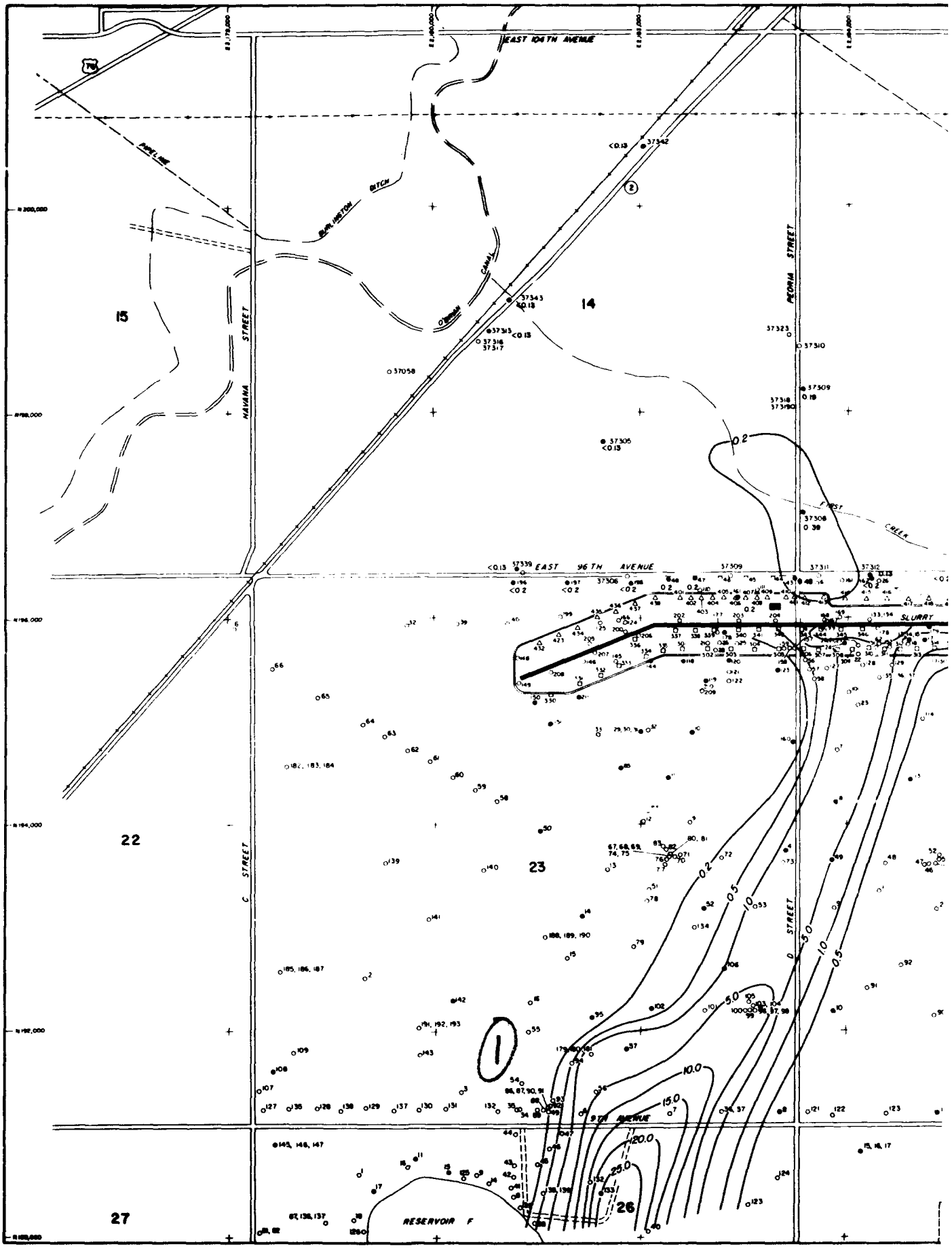
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

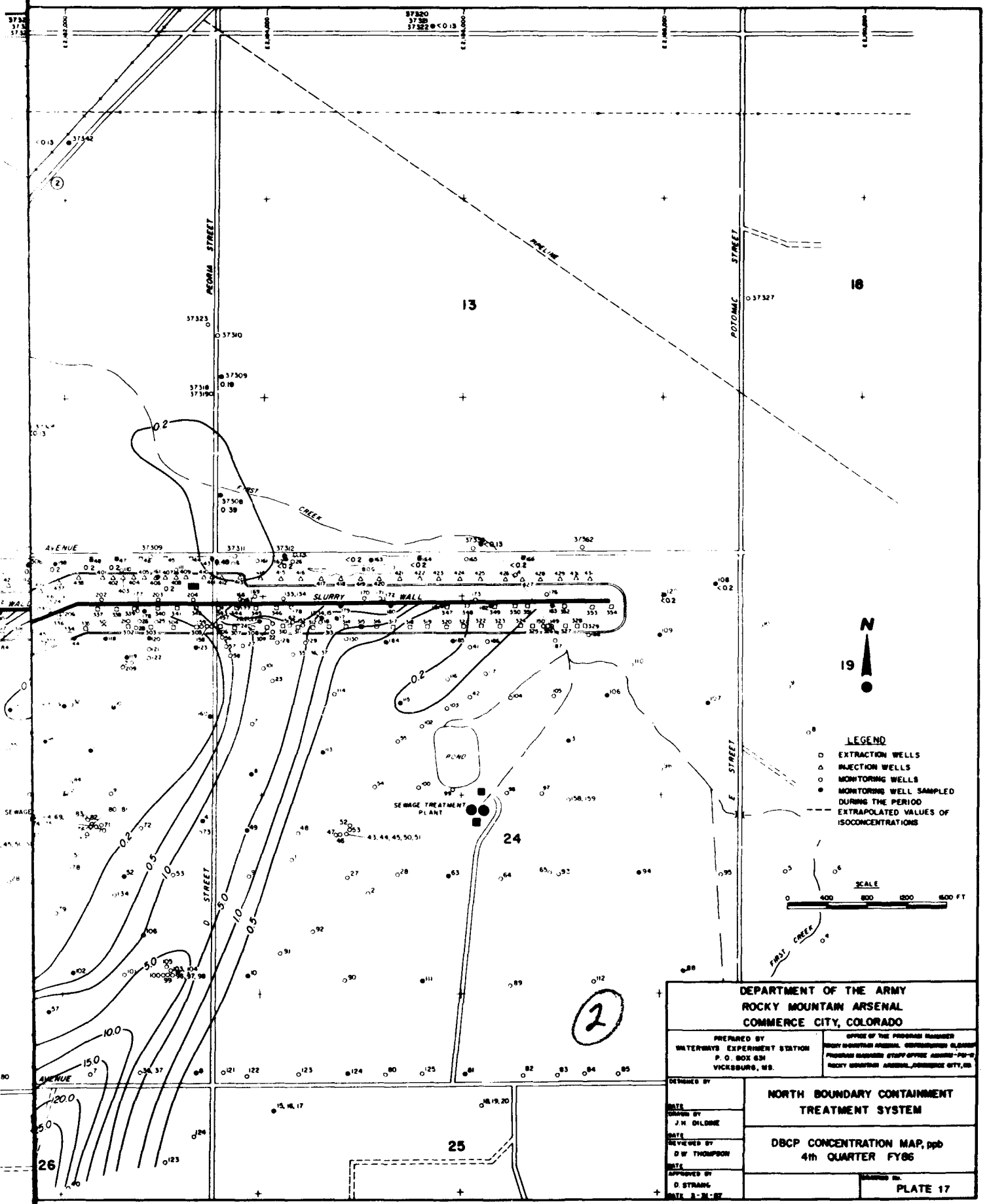
DBCP CONCENTRATION MAP, ppb
2nd QUARTER FY86

PLATE 15


EAST 104TH AVENUE
PUMP LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
C STREET
D STREET
EAST 96TH AVENUE
RESERVOIR F
15
14
22
23
26
27
1
2
0.2
0.5
1.0
5.0
10.0
15.0
20.0
25.0


PEORIA STREET
POTOMAC STREET
E STREET
PIPELINE
FIRST CREEK
AVENUE
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
0.2
0.5
1.0
5.0
10.0
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY
J.H. DILGINE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
D. STRAUB
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DBCP CONCENTRATION MAP, ppb
3rd QUARTER FY86
PLATE 16


EAST 104TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
EAST 96TH AVENUE
SLURRY
RESERVOIR F
15
14
22
23
26
27
1
2
0.2
0.5
1.0
5.0
10.0
15.0
20.0
25.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

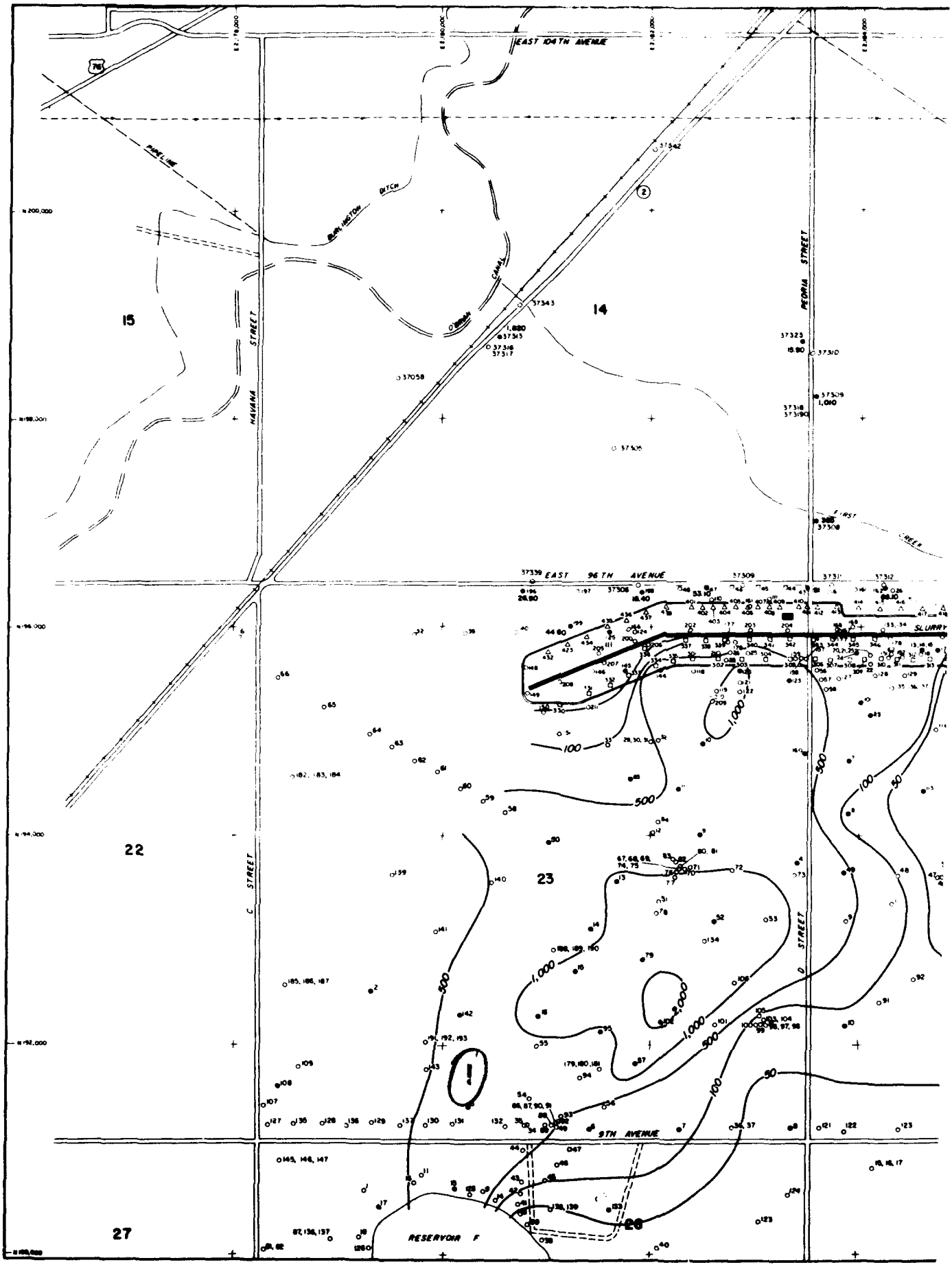
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
PROGRAM MANAGER'S STAFF OFFICE ARMCO-PEI-O
ROCKY MOUNTAIN ARSENAL/COMMERCE CITY, CO

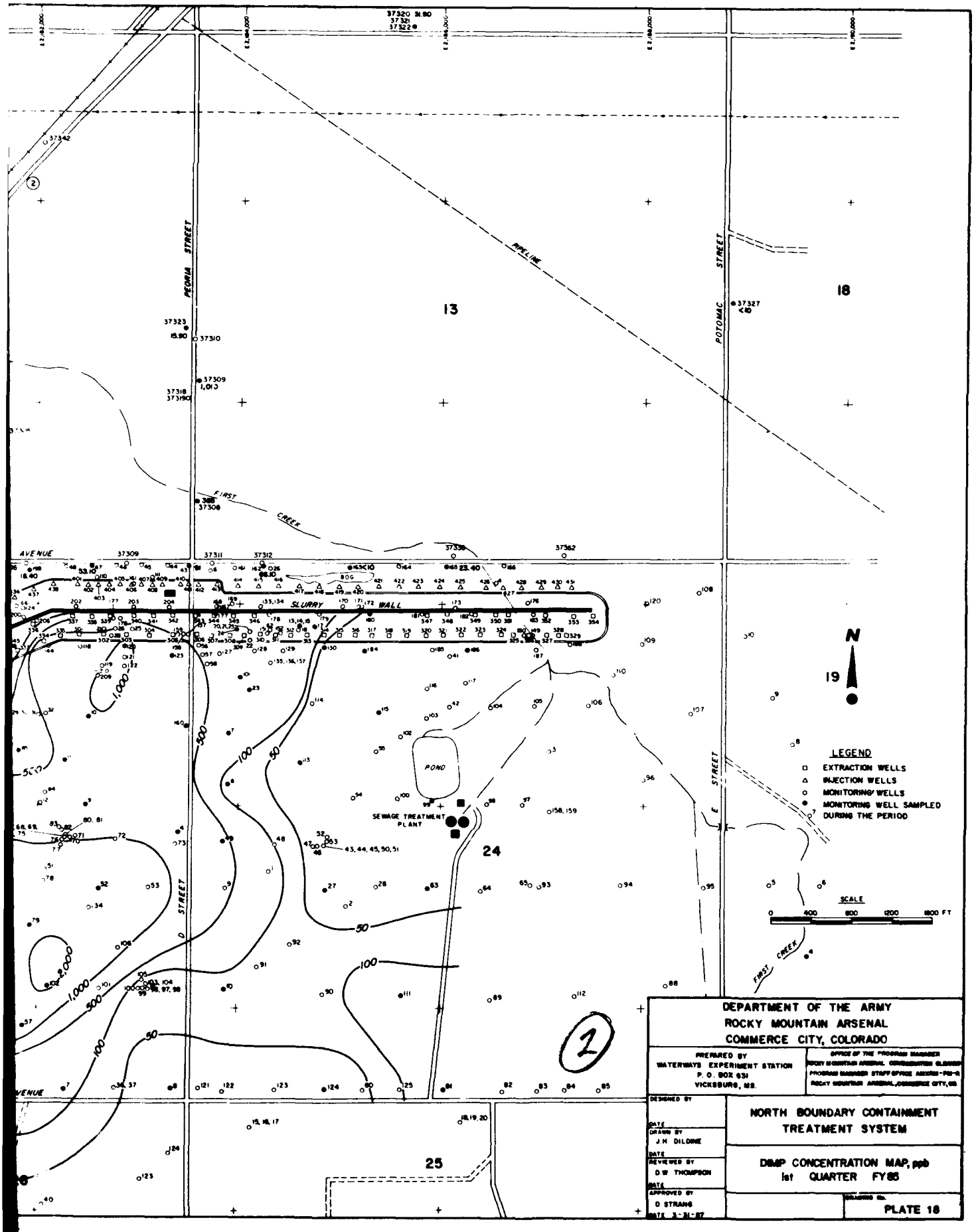
DESIGNED BY
DATE
DRAWN BY
J.H. DILORIE
DATE
REVIEWED BY
D.W. THOMPSON
DATE
APPROVED BY
D. STRANG
DATE 3-24-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

DBCP CONCENTRATION MAP, ppb
4th QUARTER FY86

DRAWING No.
PLATE 17


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
D STREET
PIPE LINE
BURLINGTON DITCH
CANAL
RESERVOIR F
SLURRY
15
14
22
23
27
26
1,000
500
100
50
2,000



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

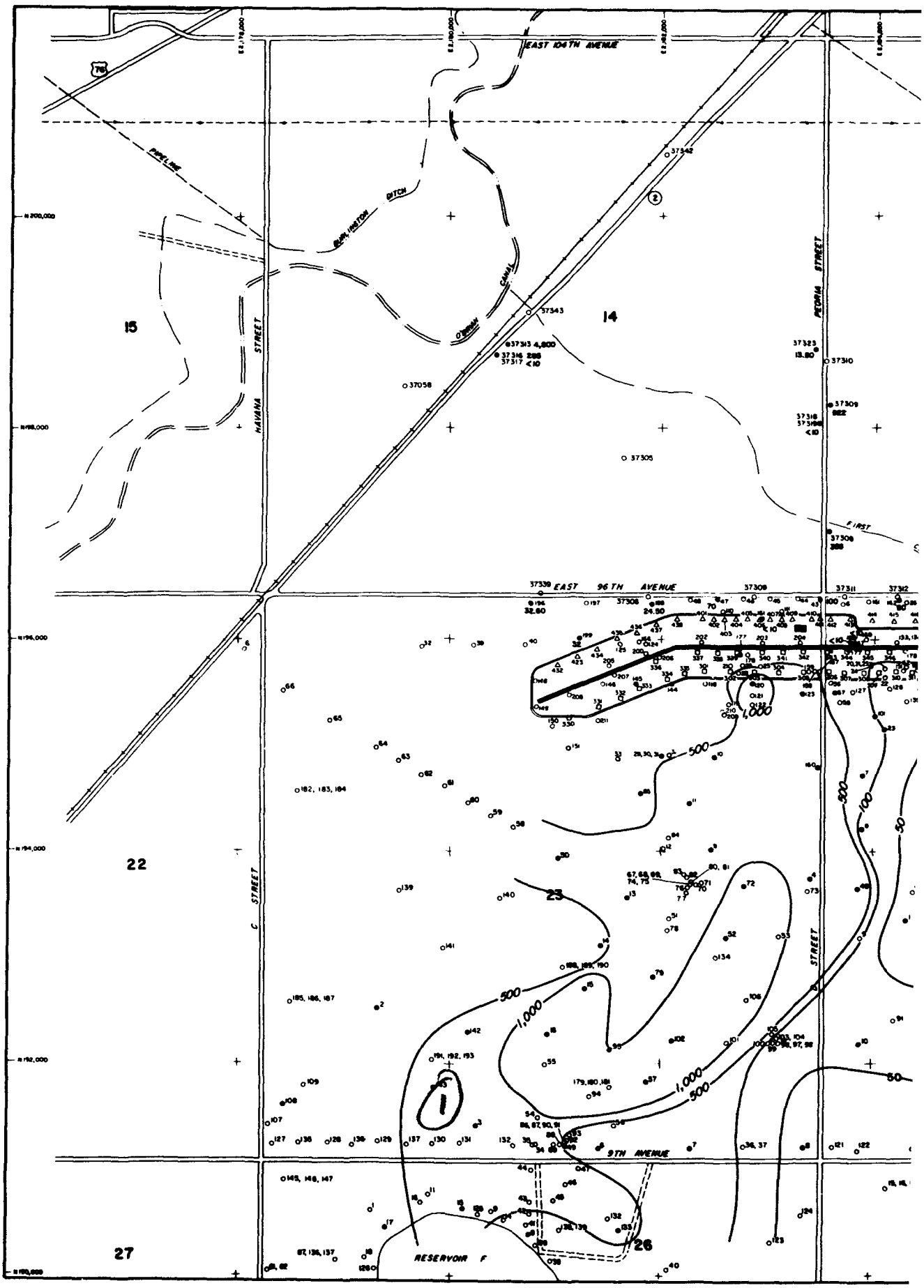
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
PROGRAM MANAGER STAFF OFFICE ARMTAC-PM-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

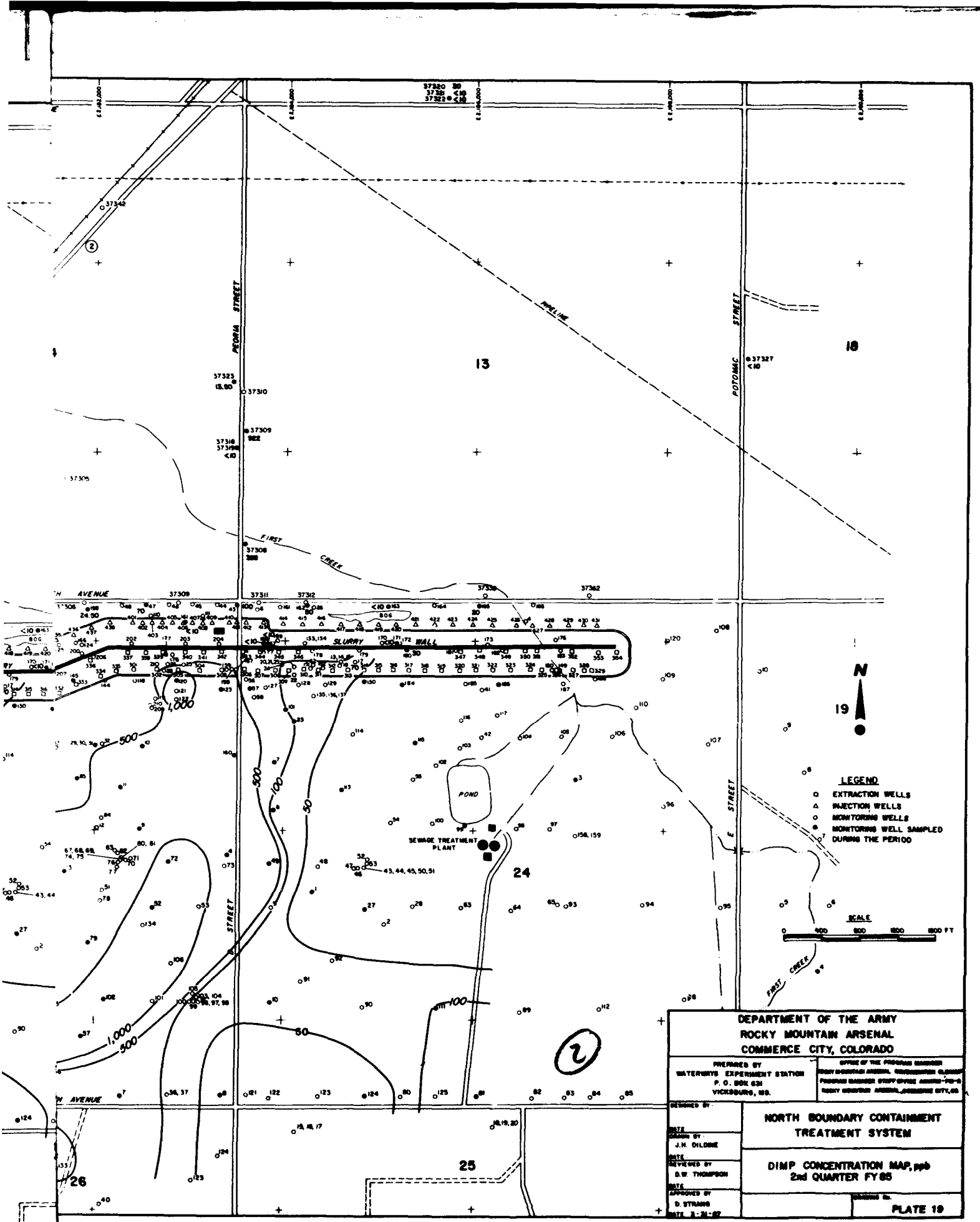
DESIGNED BY
DATE
DRAWN BY J.M. DILORNE
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY D. STRANG
DATE 3-31-87

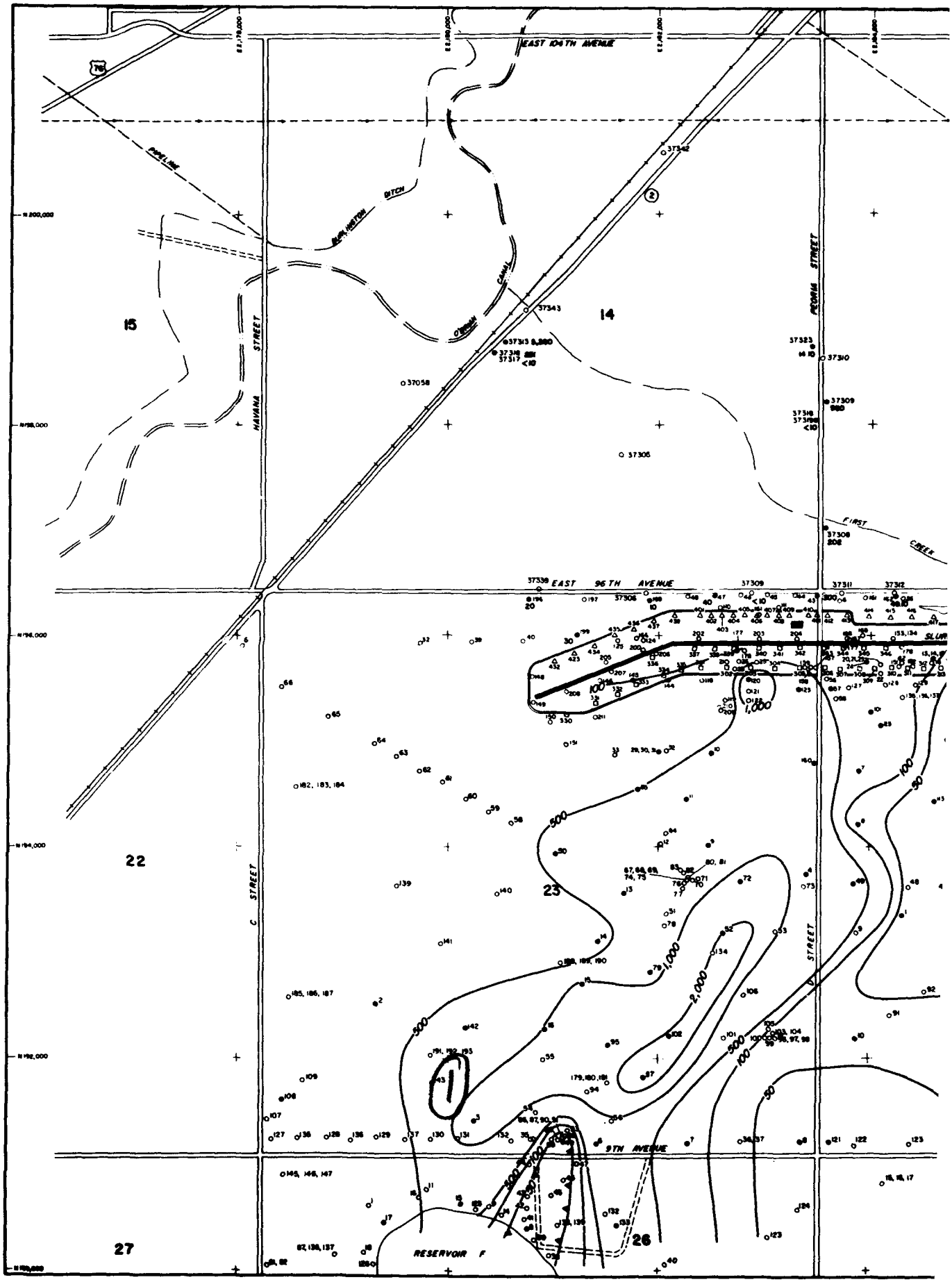
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

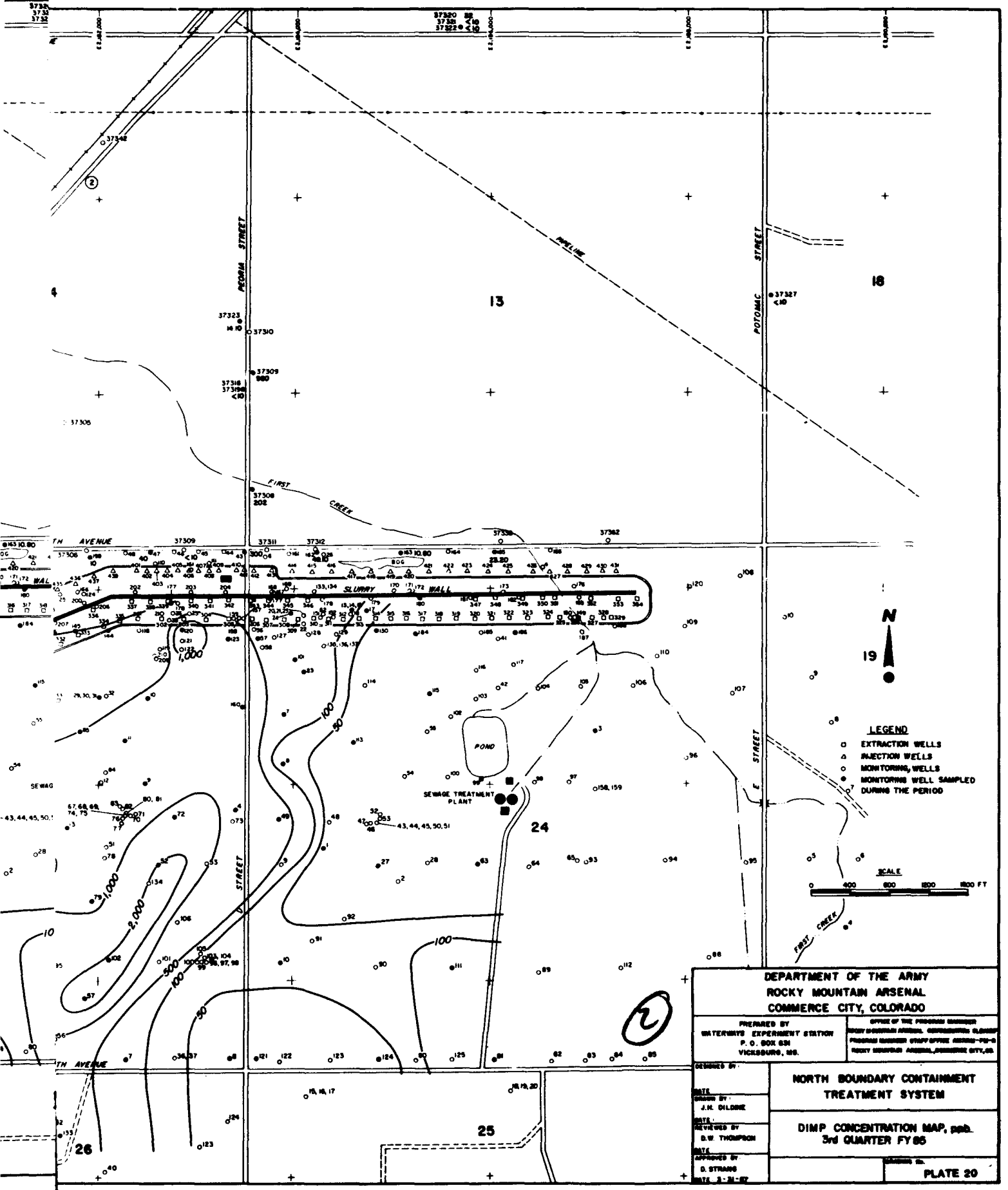
DMMP CONCENTRATION MAP, ppb
1st QUARTER FY85

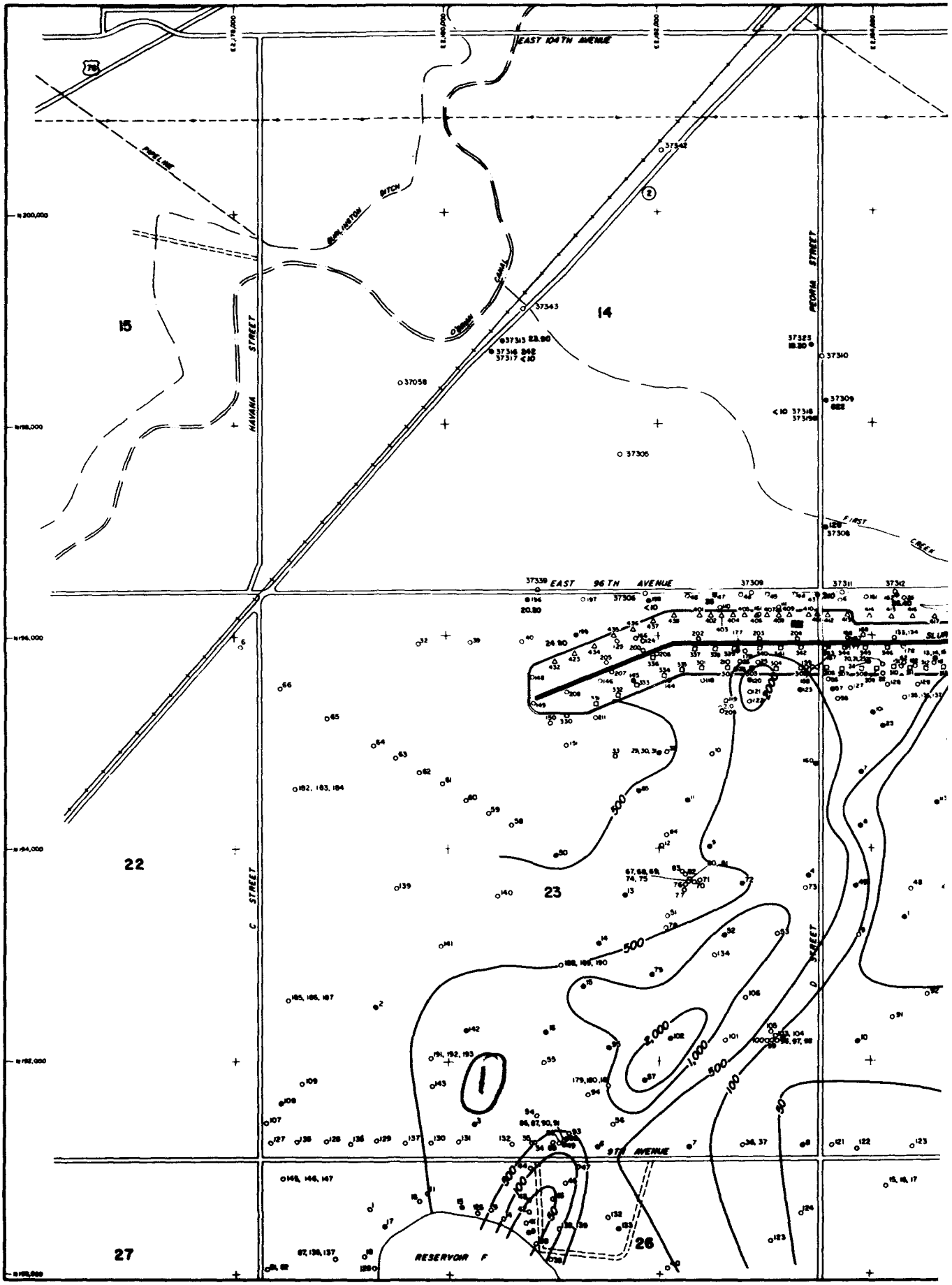
DRAWING NO.
PLATE 18

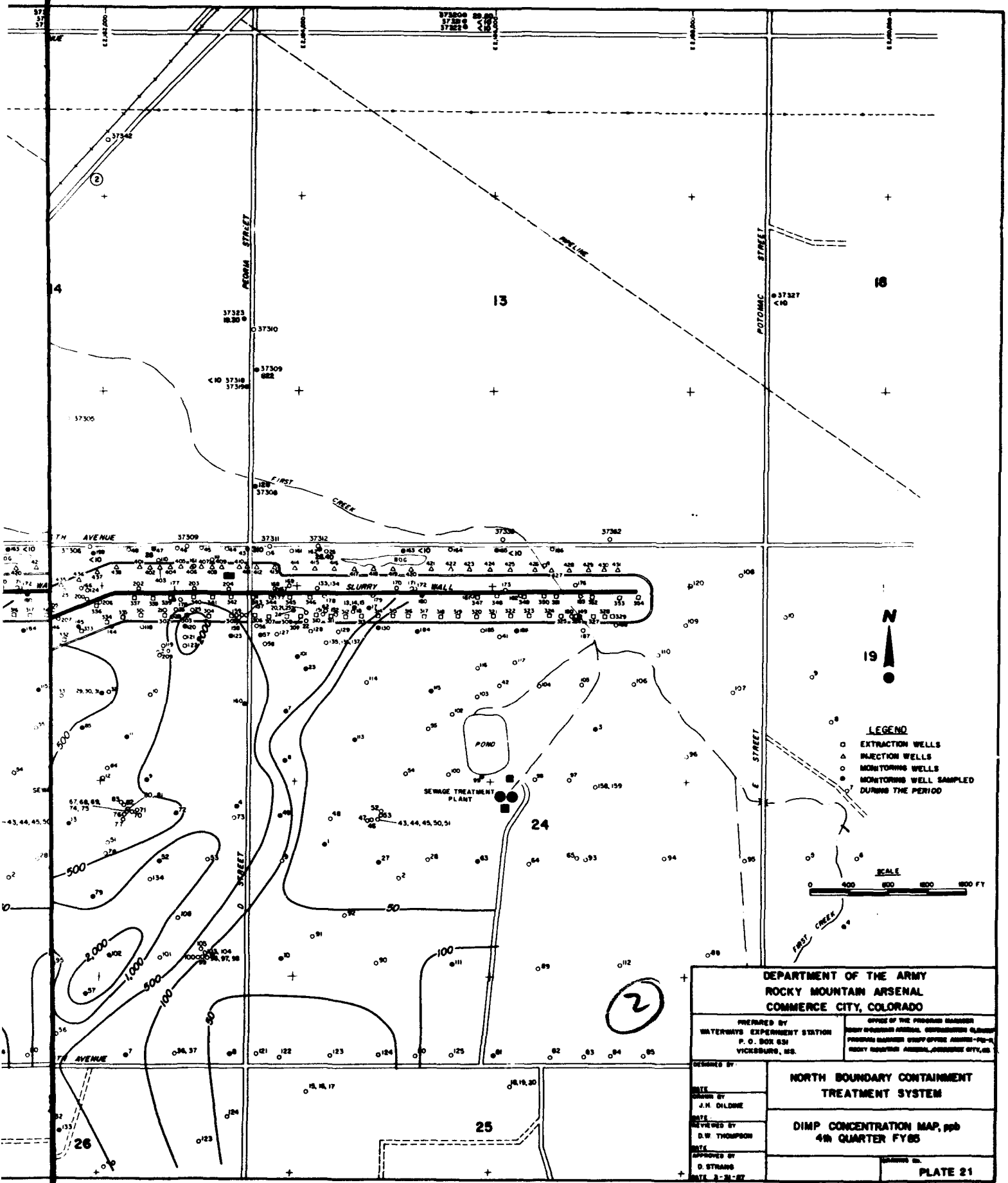

EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
C STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
1
37342
37343
37343 4,800
37316 286
37317 <10
37058
37305
37323
13.80
37310
37309
882
37318
37319
<10
37308
288
37339
32.80
37308
24.80
37311
37312
1,000
500
100
50
N 200,000
N 198,000
N 196,000
N 194,000
N 192,000
N 190,000


PEORIA STREET
POTOMAC STREET
E STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MISS.
DESIGNED BY
DRAWN BY
J.N. DILDINE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
D. STRAUB
DATE 3-31-67
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DIMP CONCENTRATION MAP, ppb
2nd QUARTER FY65
PLATE 19


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
HAVANA STREET
PEORIA STREET
C STREET
E STREET
FIRST CREEK
O'BRIAN CANAL
RESERVOIR F
15
14
22
23
26
27
1,000
500
100
50
2,000


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1600 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY
J.H. DILDINE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
D. STRAUB
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DIMP CONCENTRATION MAP, ppb
3rd QUARTER FY 85
PLATE 20


EAST 104TH AVENUE
PIPELINE
BLACK HORSE DITCH
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
C STREET
D STREET
97TH AVENUE
RESERVOIR F
15
14
22
23
26
27
500
2,000
1,000
100
50



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
PROGRAM MANAGER'S FIELD OFFICE
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATE

DRAWN BY
J.H. DILDINE

DATE

REVIEWED BY
D.W. THOMPSON

DATE

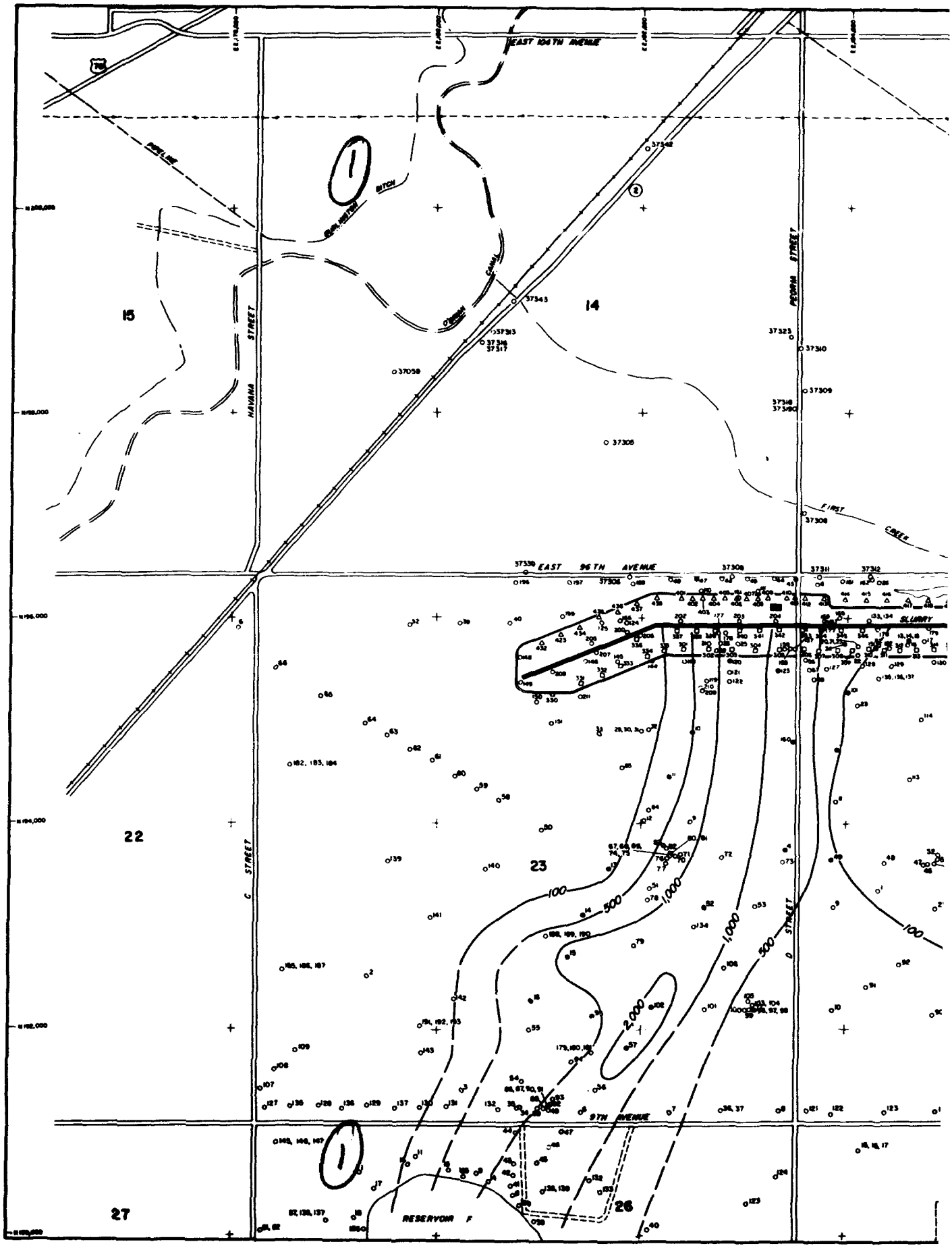
APPROVED BY
D. STRAUB

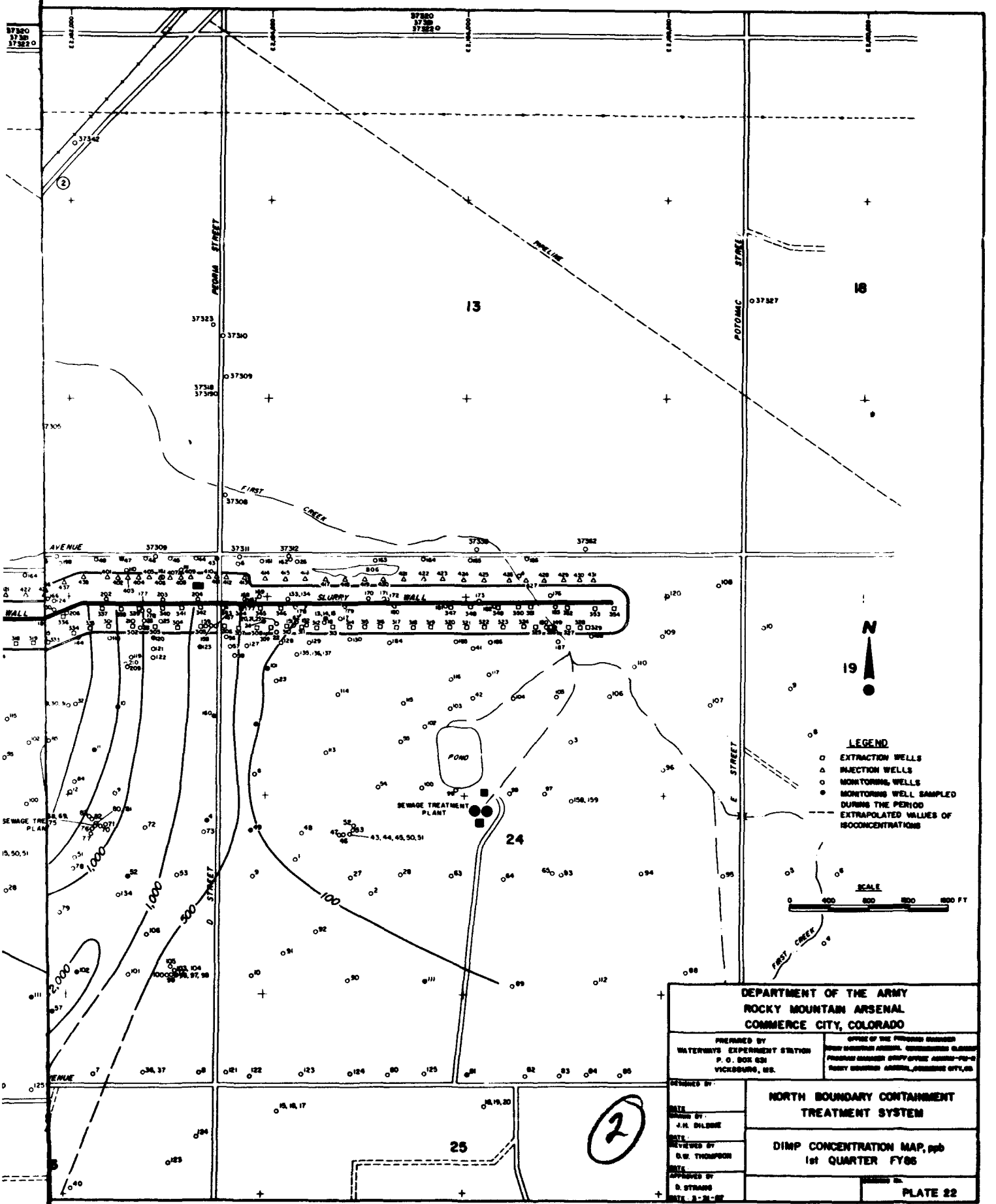
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

DIMP CONCENTRATION MAP, ppb
4th QUARTER FY86

DRAWING NO.
PLATE 21


EAST 104TH AVENUE
PIPELINE
SAND CREEK DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
FIRST CREEK
EAST 96TH AVENUE
SLURRY
C STREET
O STREET
96TH AVENUE
RESERVOIR F
15
14
22
23
26
27
100
500
1,000
2,000



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
PROGRAM MANAGER'S STAFF OFFICE, ARMY-TOAD
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

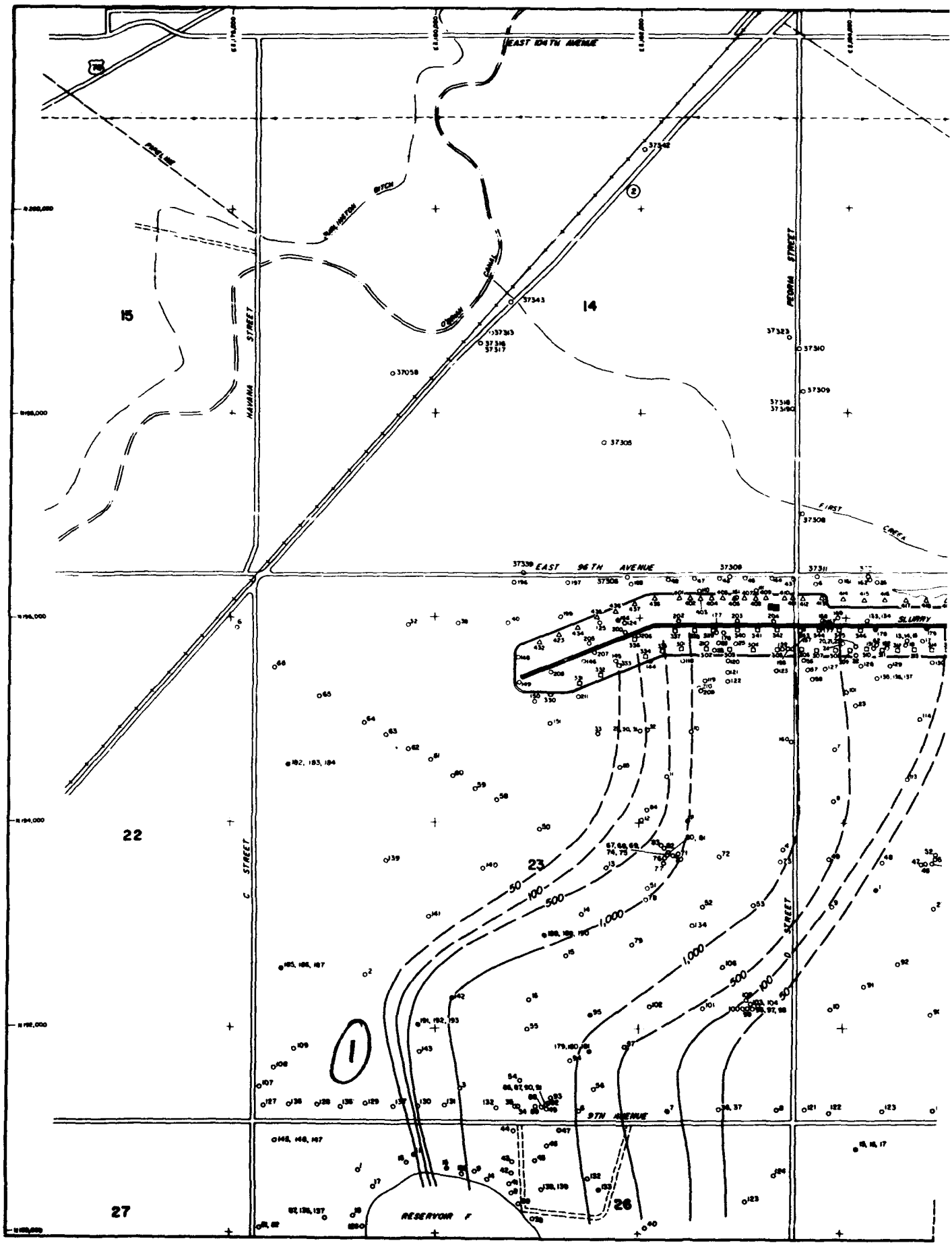
DESIGNED BY
DATE
DRAWN BY
J.H. GILSBIE
DATE
REVIEWED BY
G.W. THOMPSON
DATE
APPROVED BY
D. STRAUB
DATE 3-24-87

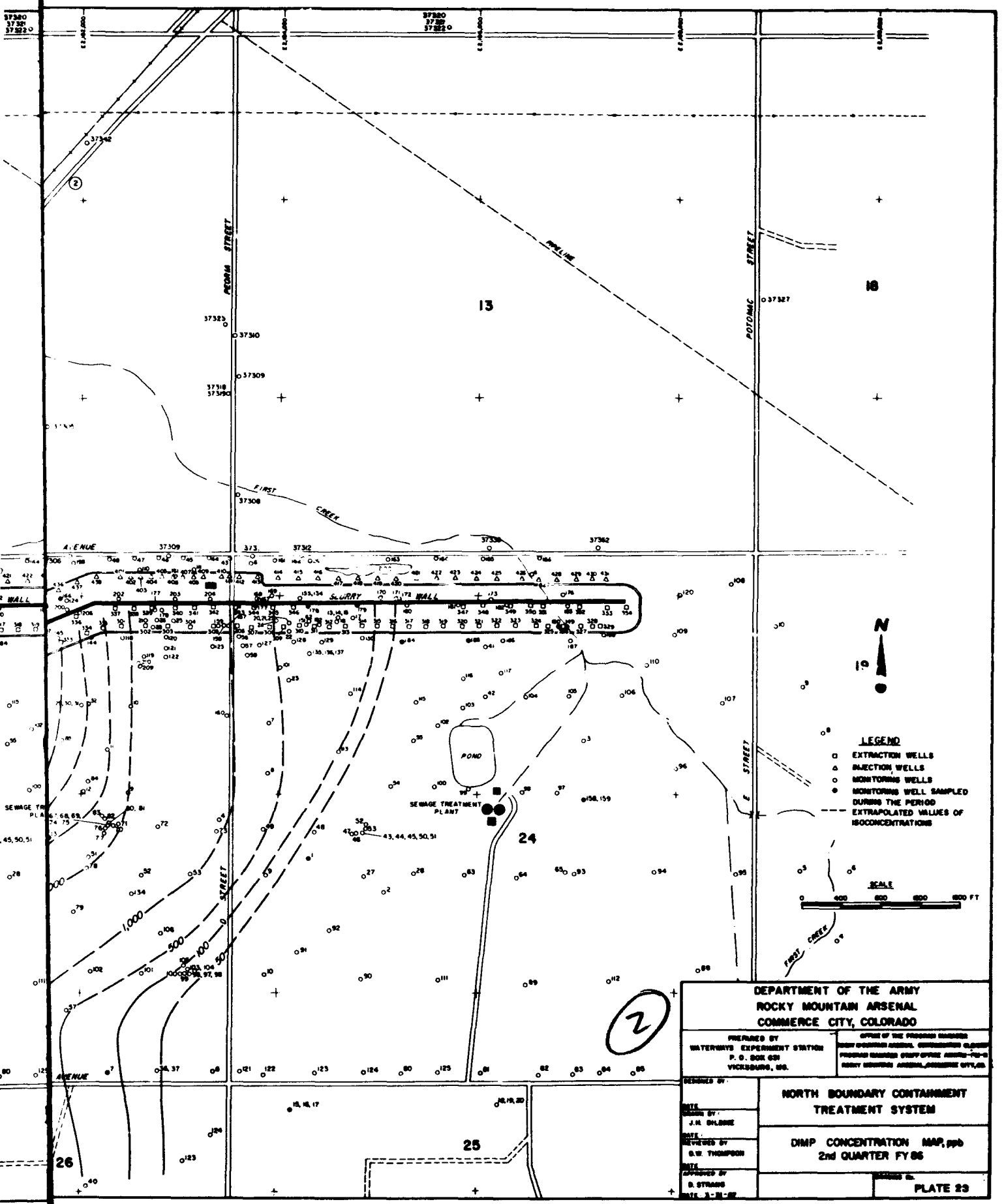
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

DIMP CONCENTRATION MAP, ppb
1st QUARTER FY86

DRAWING NO.
PLATE 22

(2)


EAST 104TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
EAST 96TH AVENUE
96TH AVENUE
RESERVOIR F
15
14
22
23
26
27
50
100
500
1,000
1,000
500
100
50



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

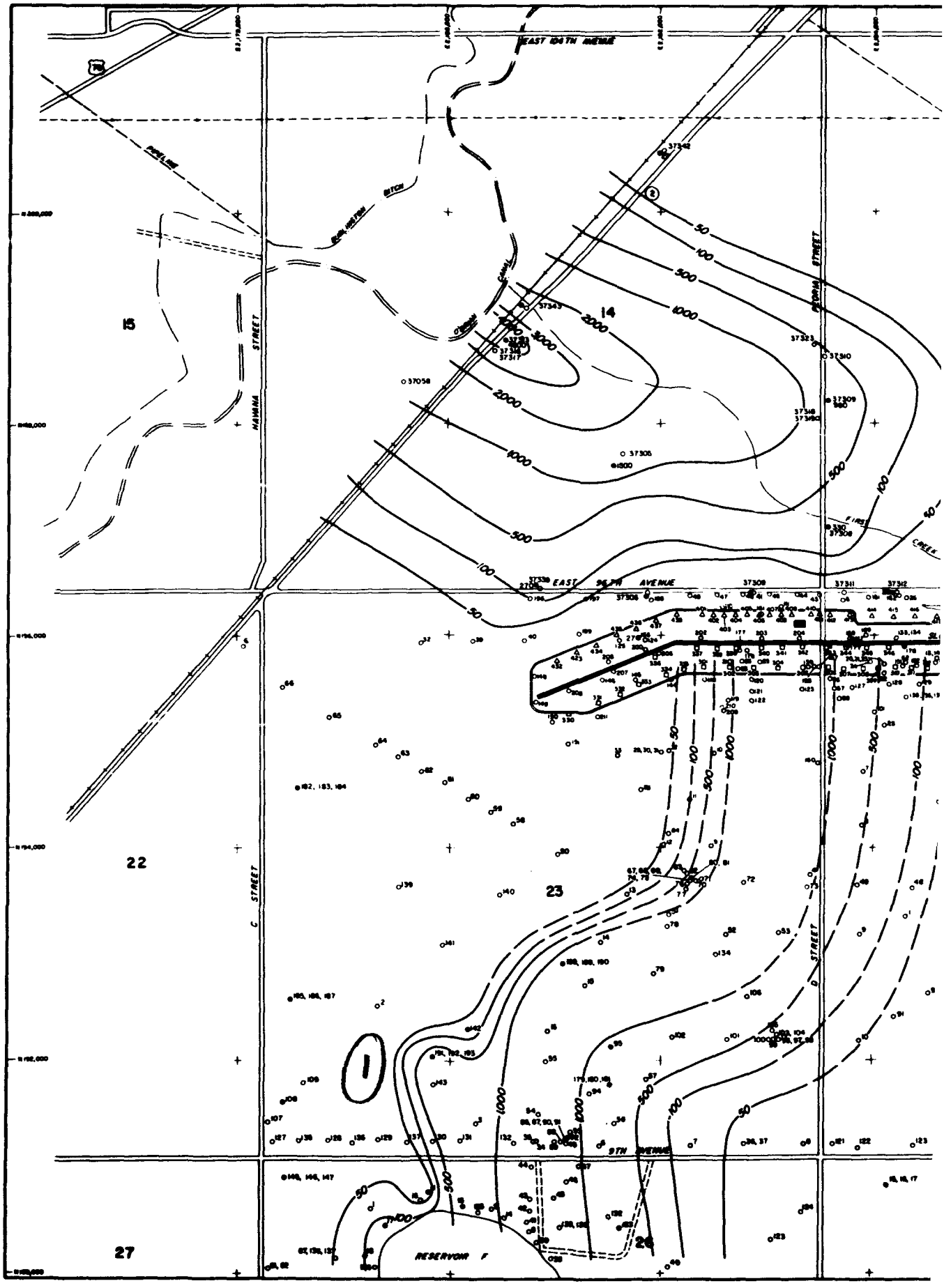
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
PROGRAM MANAGER'S STAFF OFFICE, ARMY-TOAD
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

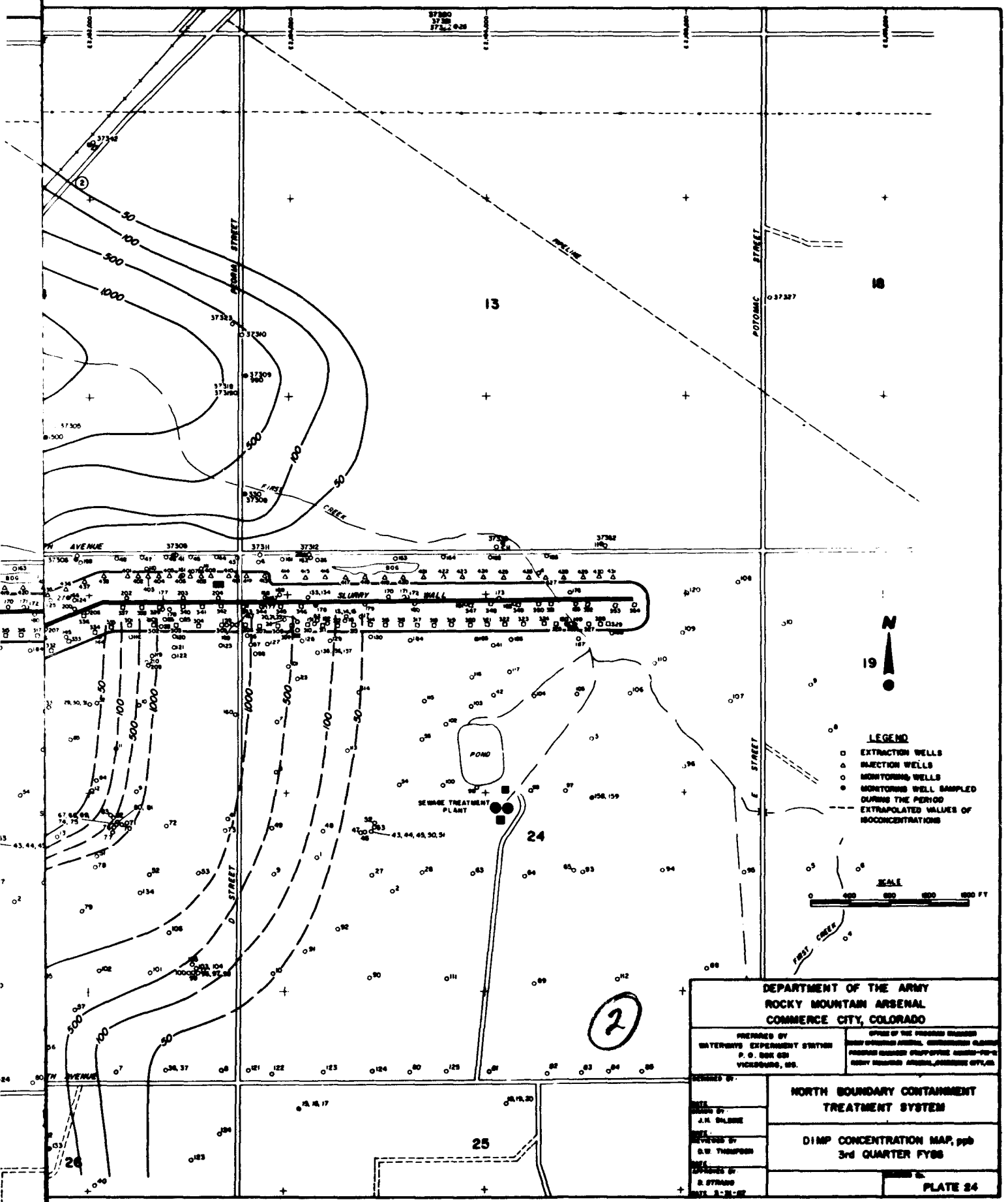
DESIGNED BY:
DATE:
DRAWN BY: J.M. DILORIE
DATE:
REVIEWED BY: G.W. THOMPSON
DATE:
APPROVED BY: D. STRAUB
DATE: 3-14-86

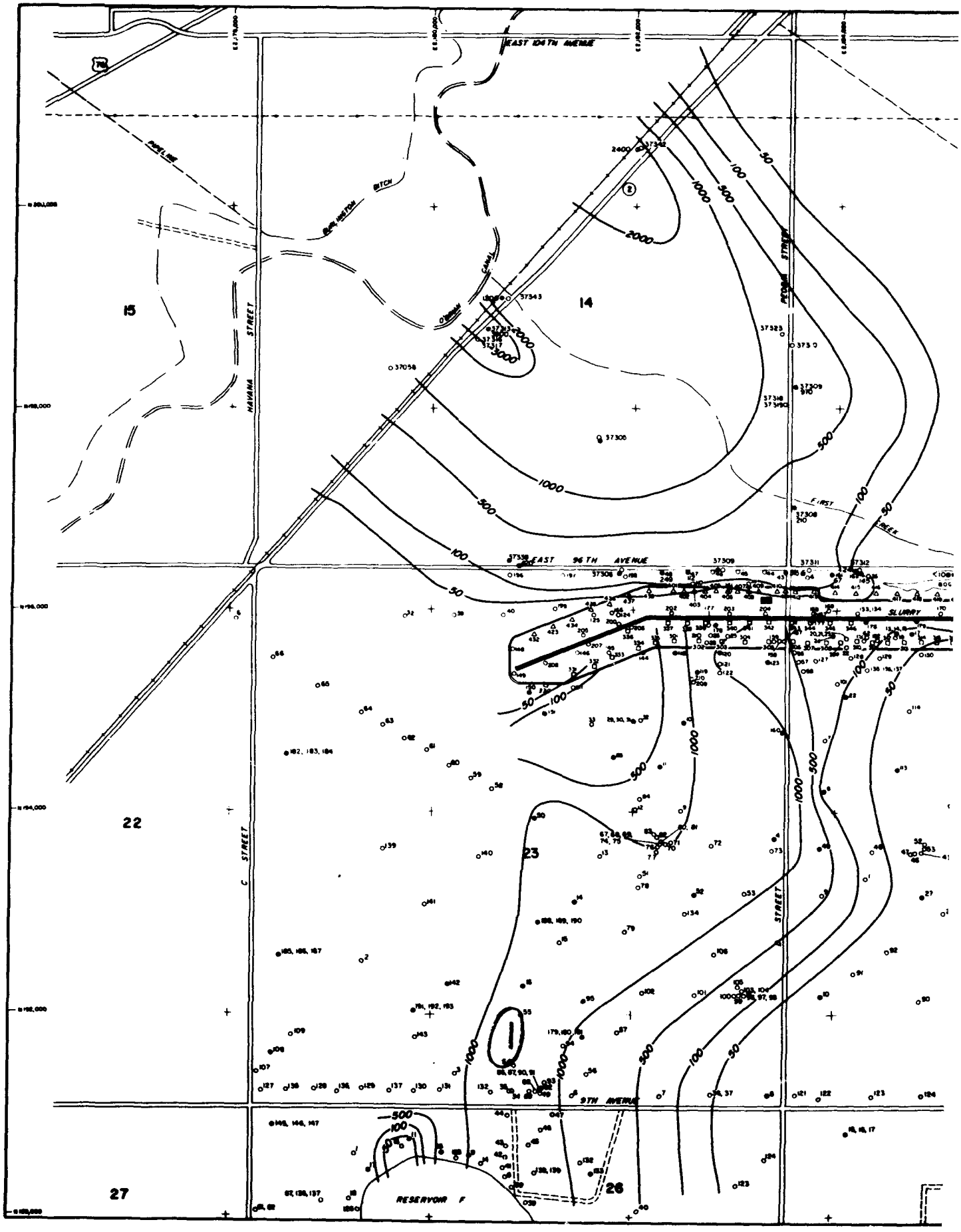
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

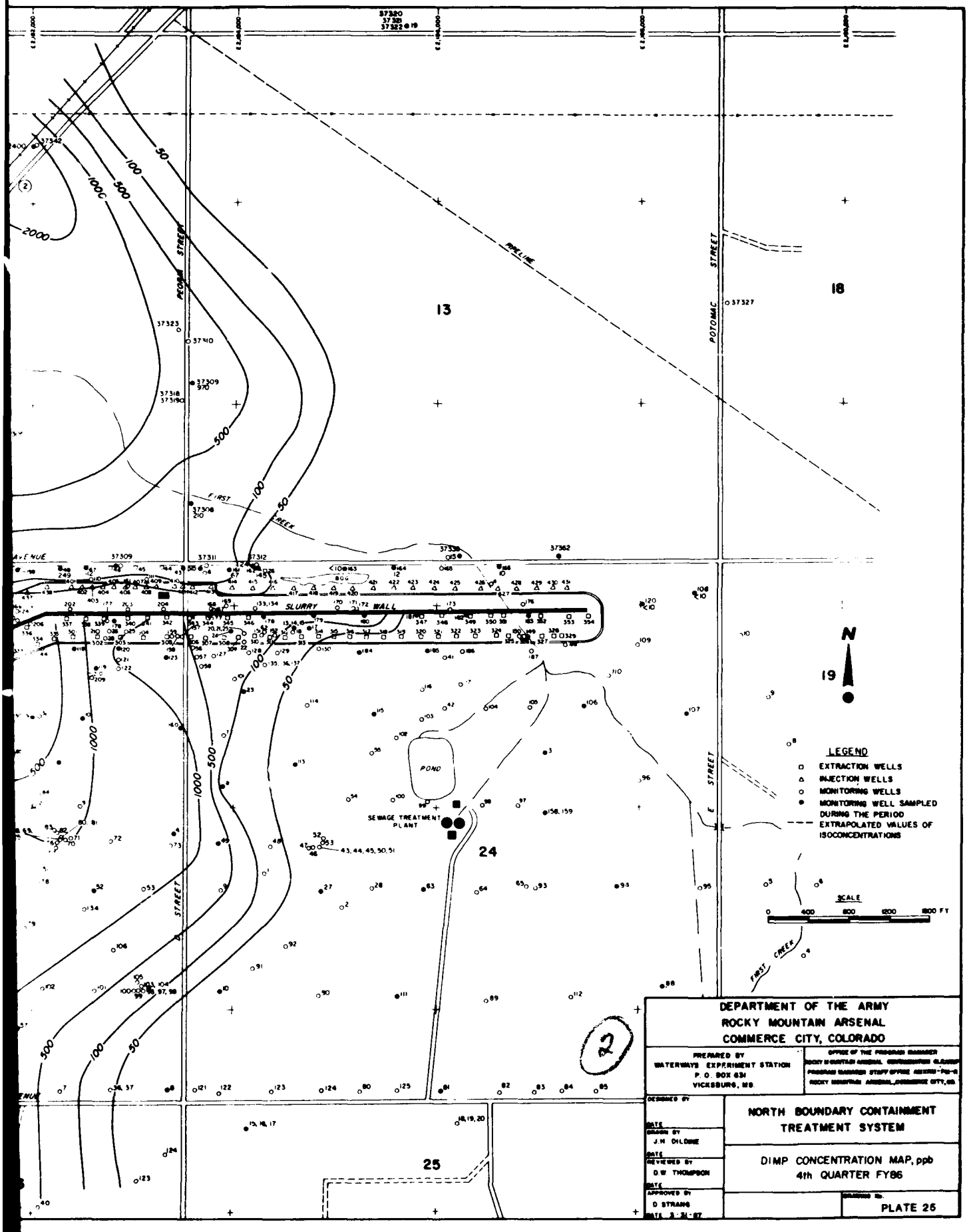
DIMP CONCENTRATION MAP, ppb
2nd QUARTER FY 86

DRAWING No.
PLATE 23


EAST 104TH AVENUE
HAVANA STREET
C STREET
EAST 96TH AVENUE
96TH AVENUE
RESERVOIR F
15
14
22
23
27
28
50
100
500
1000
2000
3000
4000


PEORIA STREET
POTOMAC STREET
E STREET
D STREET
PIPELINE
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
FIRST CREEK
13
18
19
24
25
26
50
100
500
1000
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DIMP CONCENTRATION MAP, ppb
3rd QUARTER FY88
PLATE 24


EAST 104TH AVENUE
PIPE LINE
BOX BOTTOM DITCH
OSWEGO CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST
SLURRY
C STREET
STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
27
26
2400
2000
3000
1000
500
100
50



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ABERDEEN PROVING GROUND
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATE

DRAWN BY
J.M. CHLOSNE

DATE

REVIEWED BY
D.W. THOMPSON

DATE

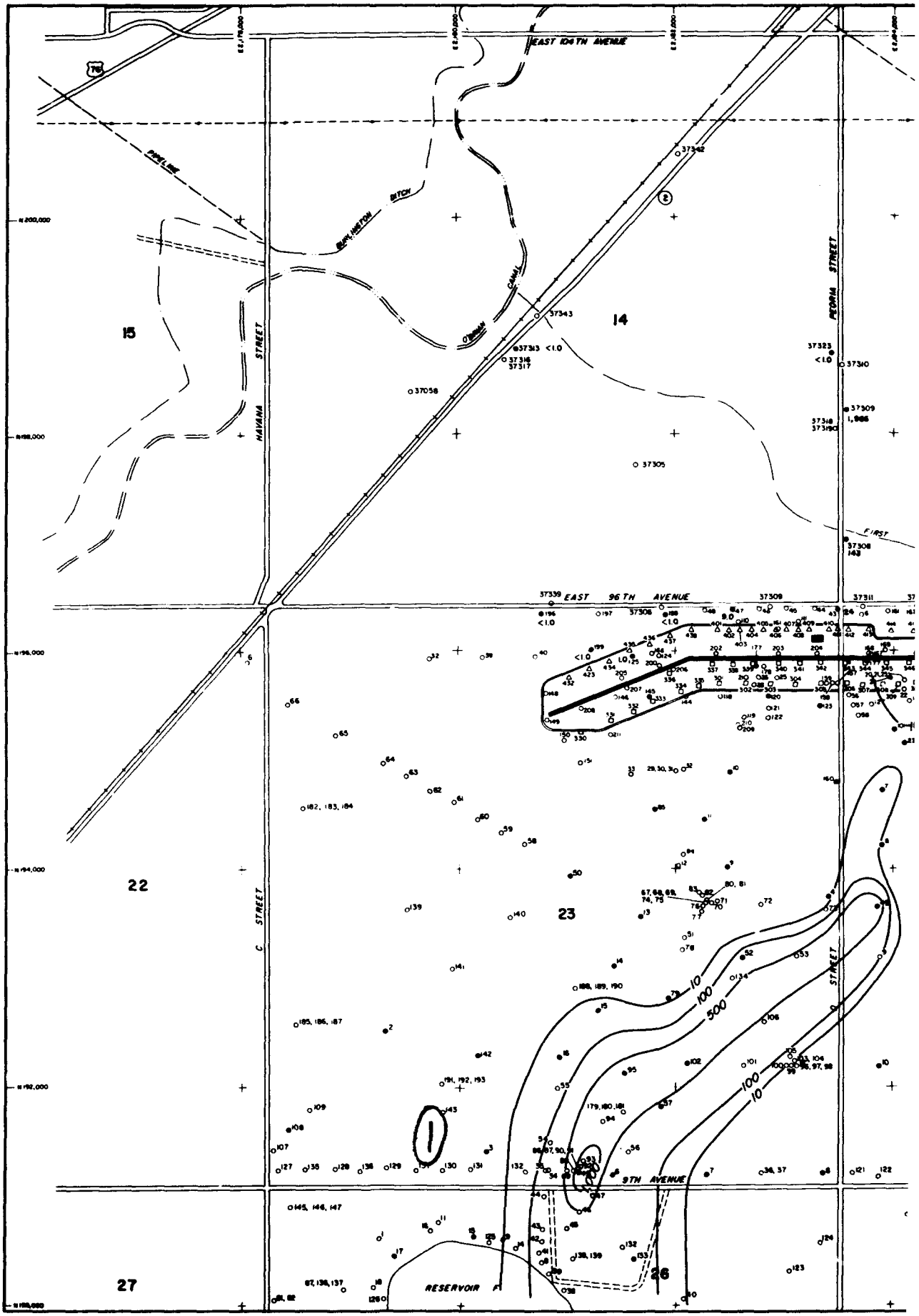
APPROVED BY
D STRANG

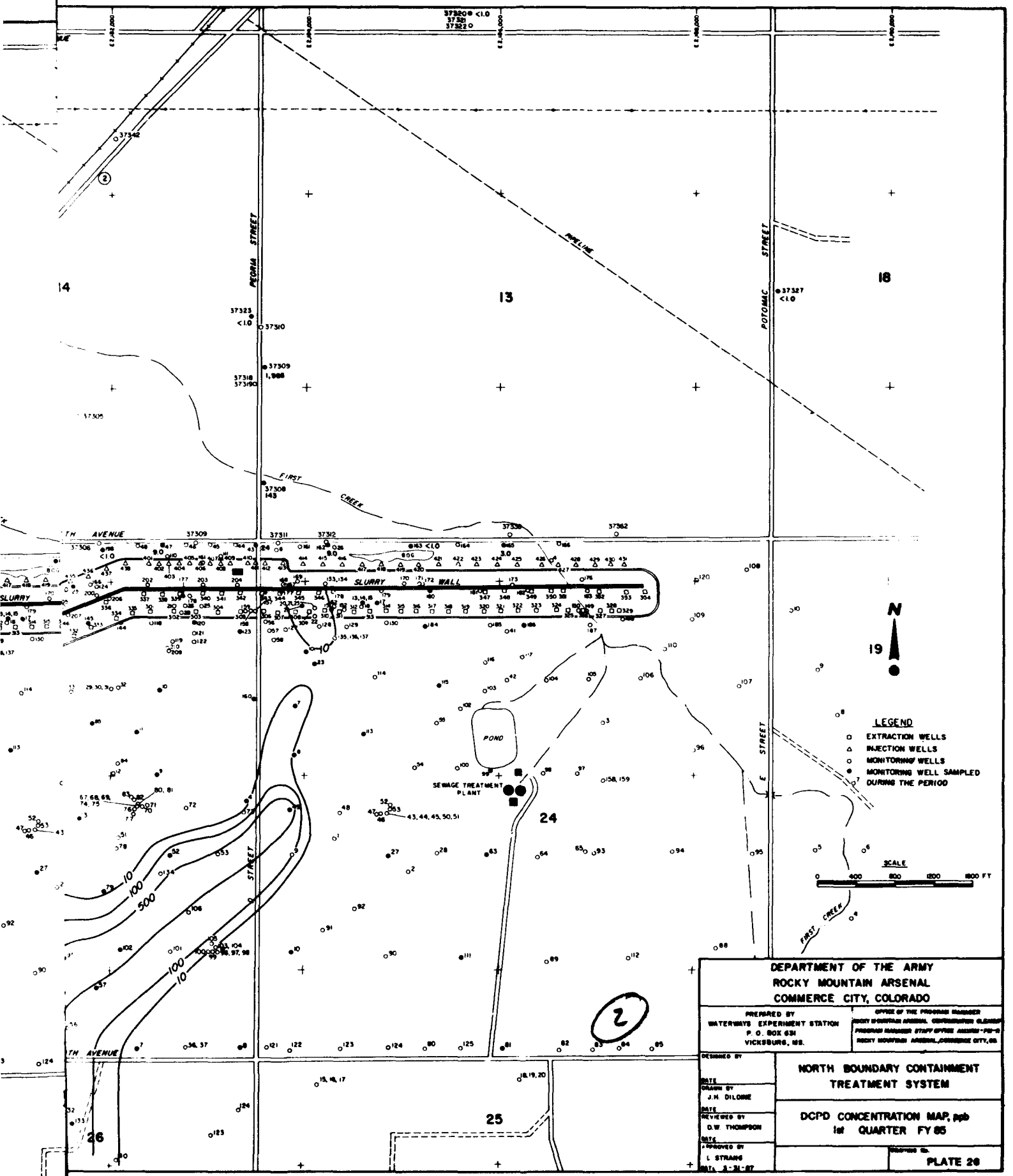
DATE 3-24-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

DIMP CONCENTRATION MAP, ppb
4th QUARTER FY86

DRAWING NO.
PLATE 25


EAST 104TH AVENUE
PARK LANE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST
C STREET
STREET
9TH AVENUE
RESERVOIR
15
14
22
23
26
27
37342
37343
37343 <1.0
37316
37317
37058
37305
37325
<1.0
37340
37309
1,986
37318
37319
37308
149
37339
37306
37311
<1.0
10
100
500
100
10



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

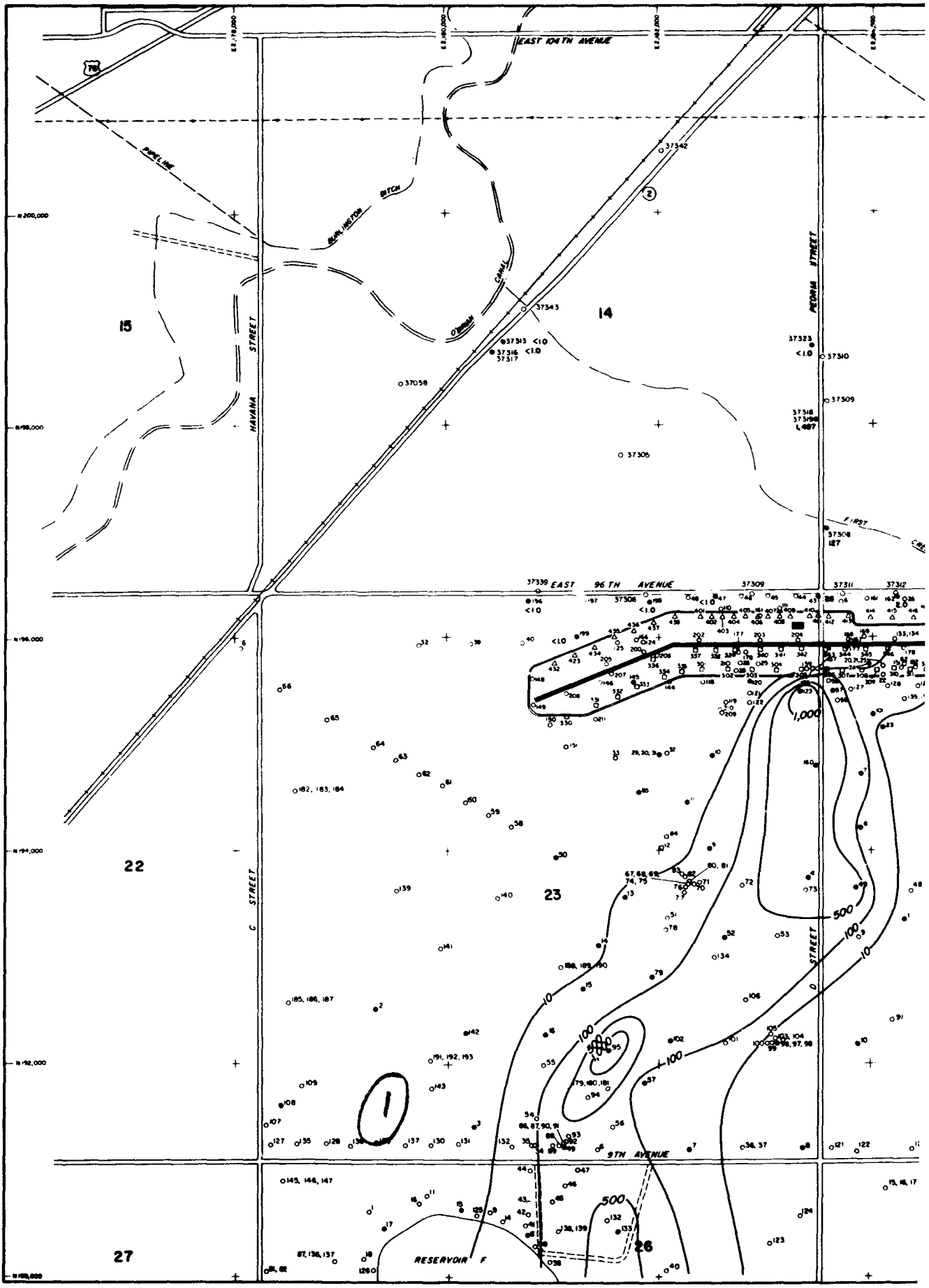
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ARMCOM-FSC-RI
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

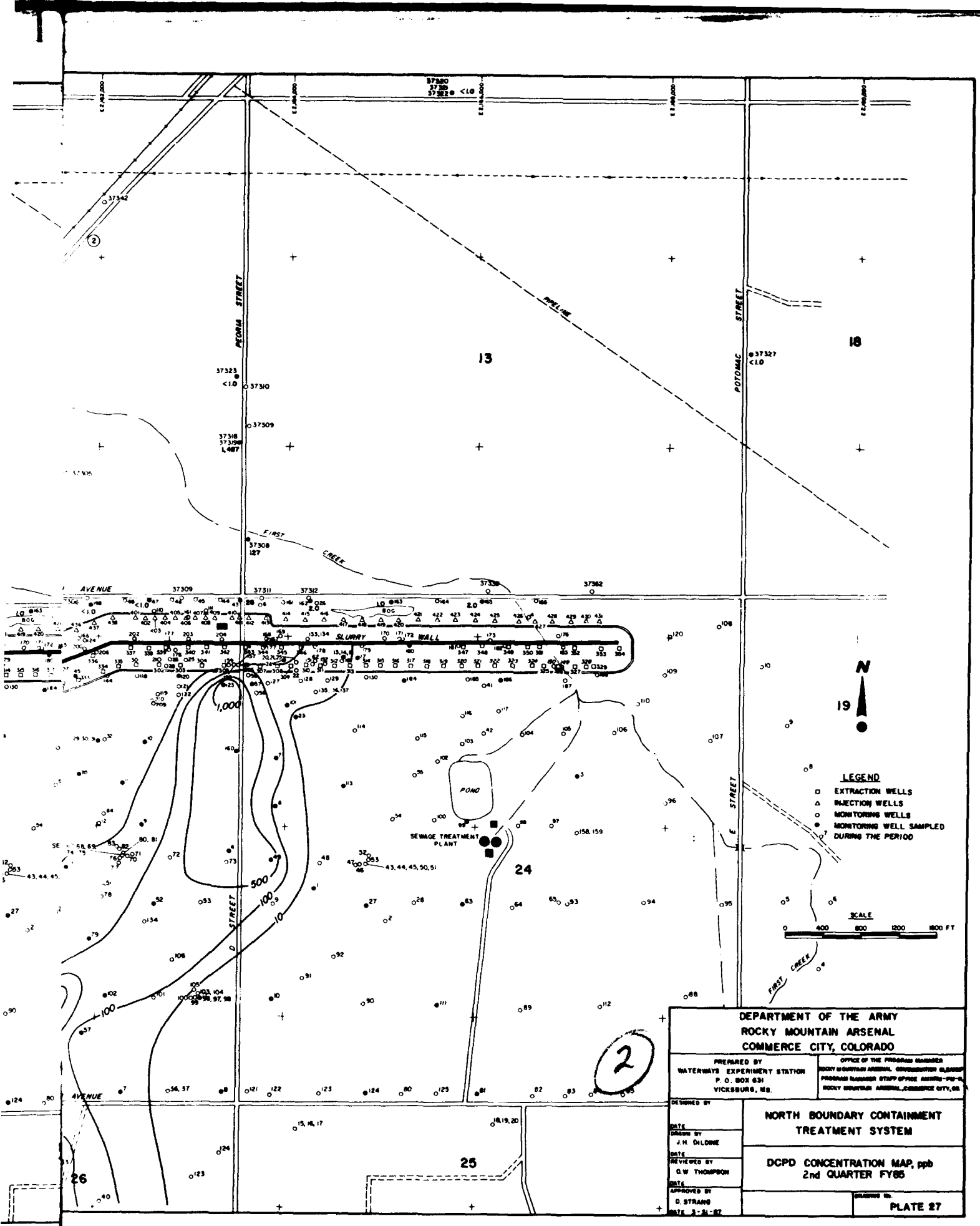
DESIGNED BY
DATE
DRAWN BY J.H. DILORIE
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY L. STRANG
DATE 8-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

DCPD CONCENTRATION MAP, ppb
1st QUARTER FY 85

DRAWING NO.
PLATE 28


EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
C STREET
D STREET
EAST 96TH AVENUE
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
37342
37343
37058
37306
37310
37309
37339
37311
37312
1,000
500
100
10



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

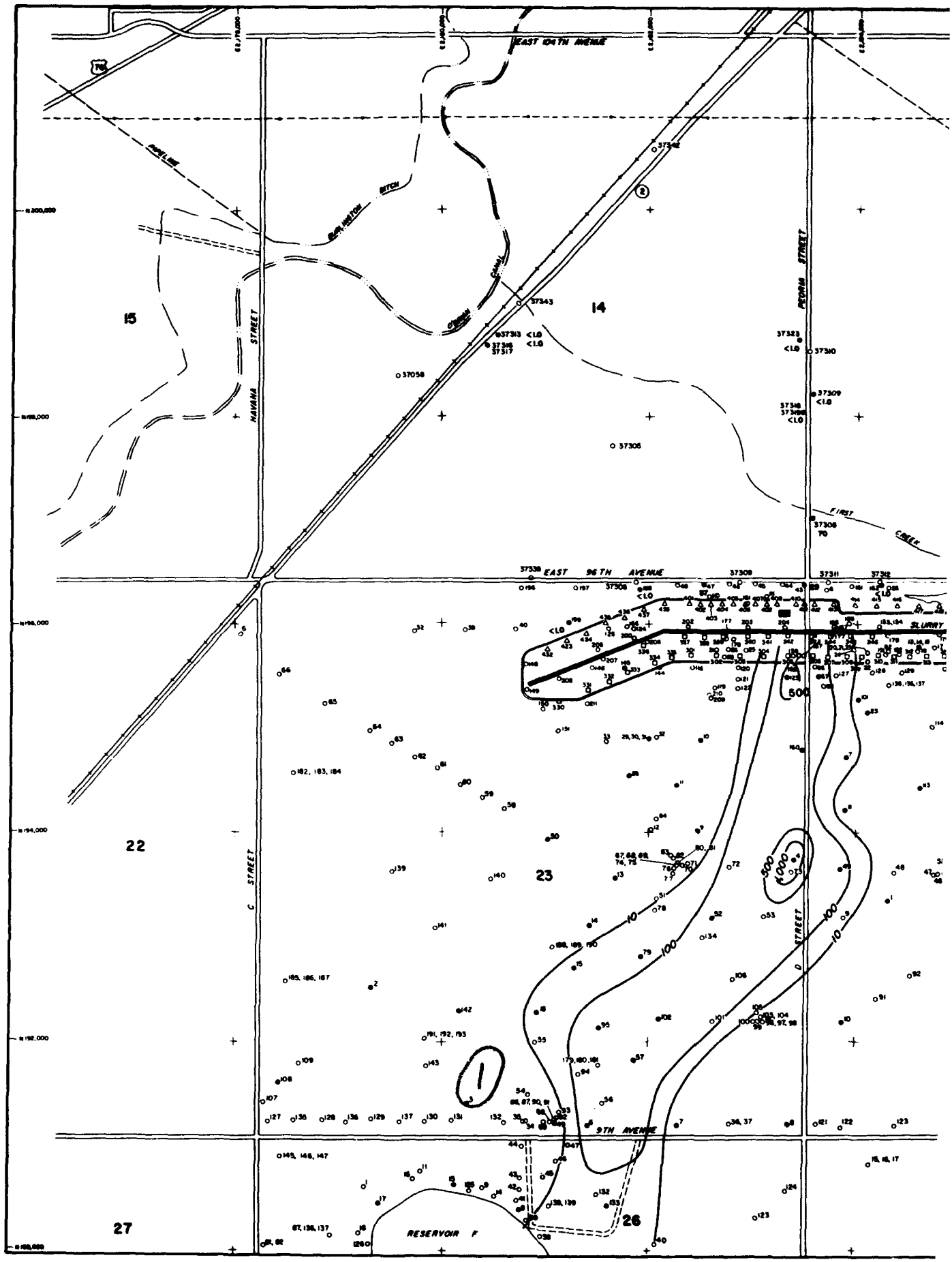
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ATTN: DRXRM-PD-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

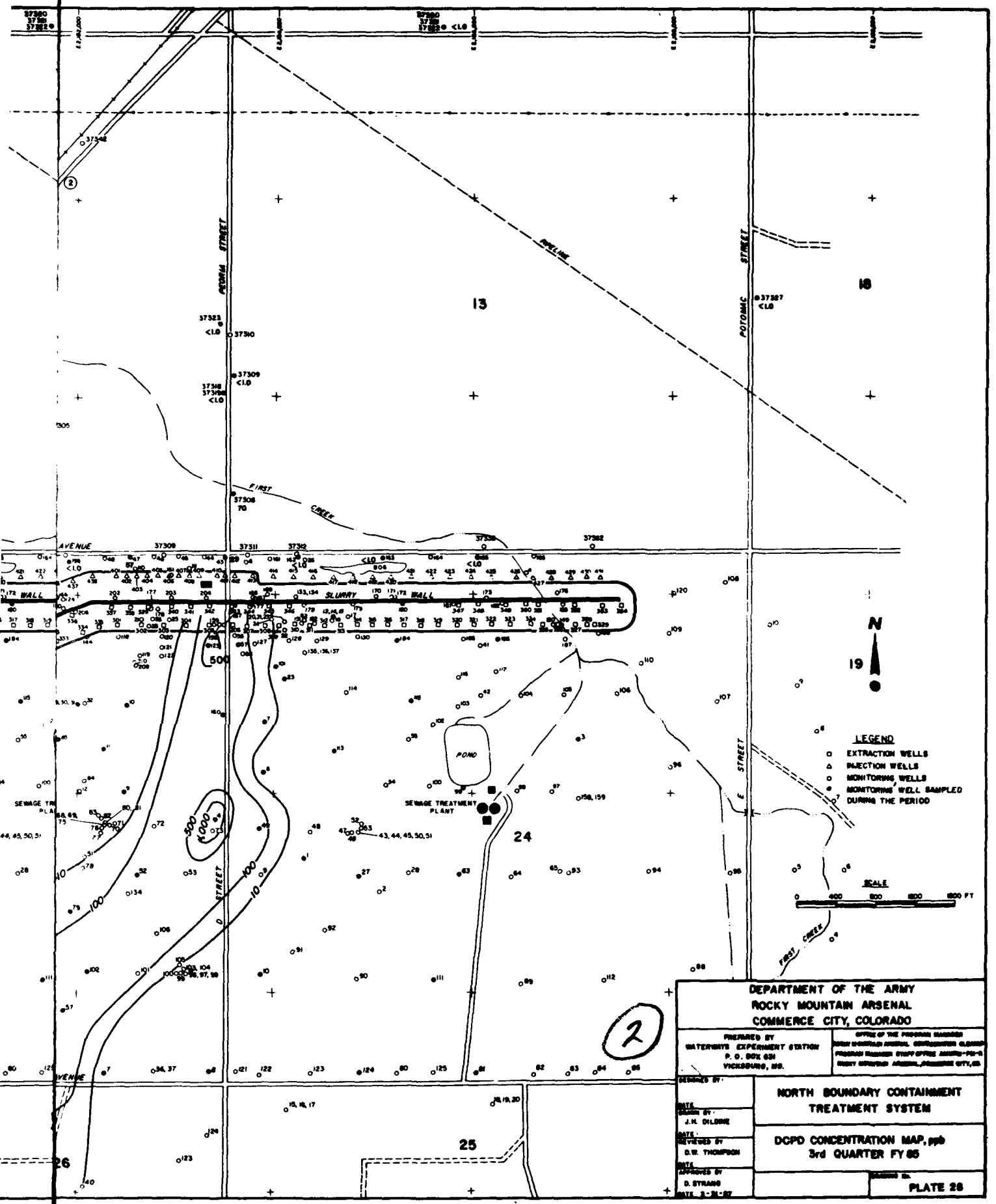
DESIGNED BY
DATE
DRAWN BY J.H. DILDINE
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY D. STRANG
DATE 3-24-87

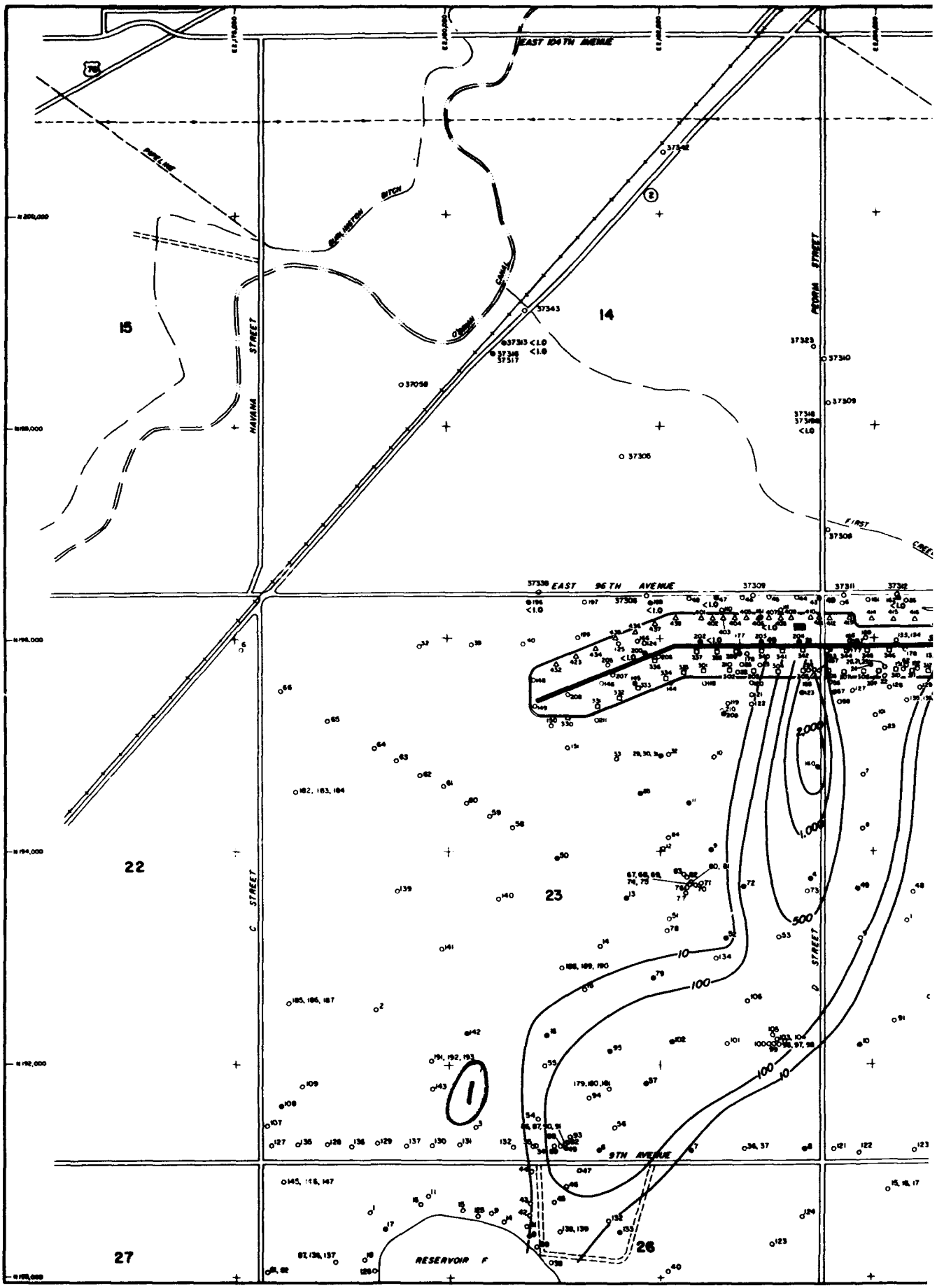
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

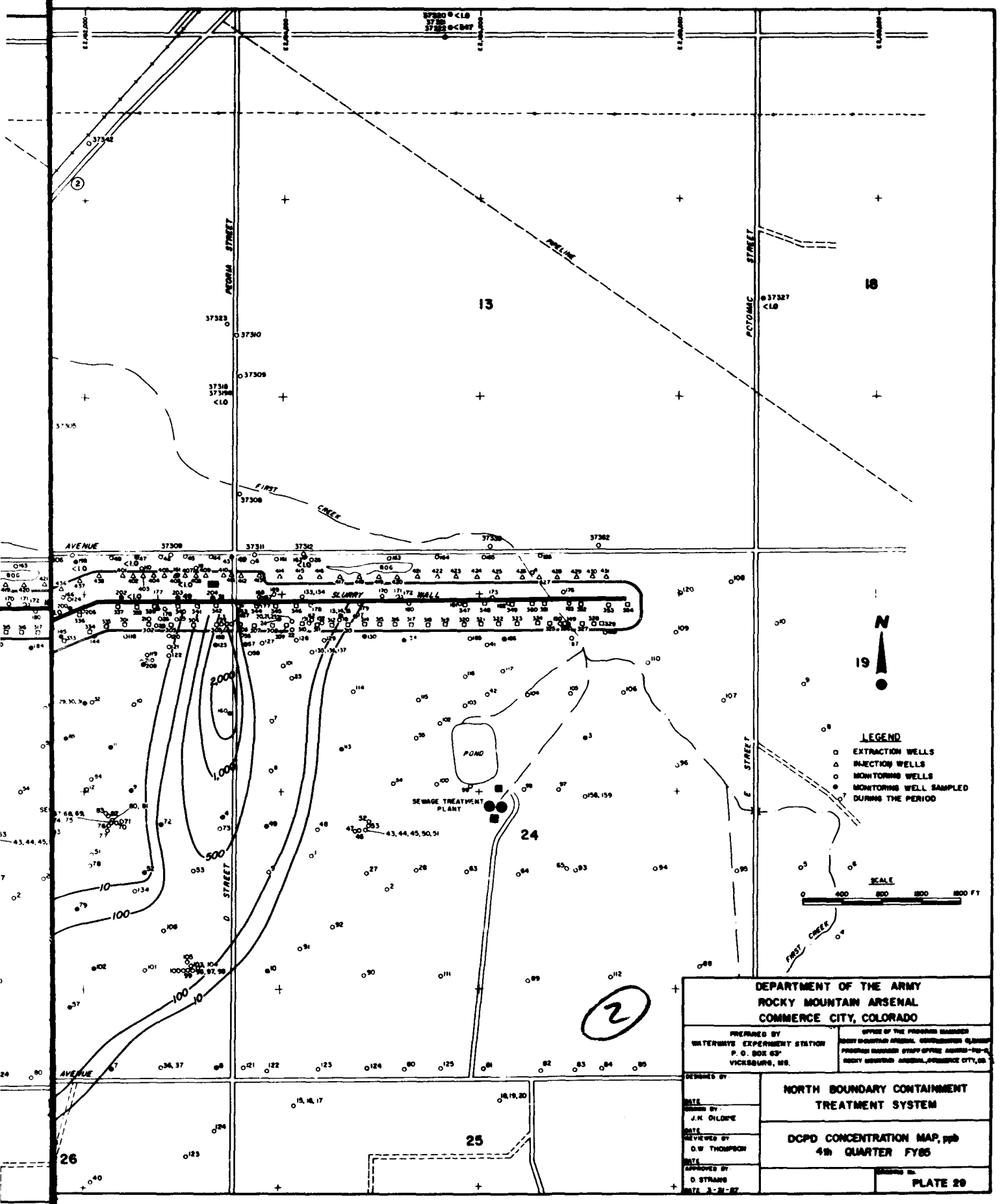
DCPD CONCENTRATION MAP, ppb
2nd QUARTER FY85

DRAWING No. PLATE 27


EAST 104TH AVENUE
PIPELINE
SUPERIOR DITCH
CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
C STREET
D STREET
ST LARRY
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
500
1,000
100
10
1


FOURTH STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
SEWAGE TREATMENT PLANT
O STREET
E STREET
AVENUE
AVENUE
13
18
19
24
25
26
500
1000
100
10
40
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MISS.
DESIGNED BY
DRAWN BY
J.M. DILBONE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
D. STRAUB
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM
DCPD CONCENTRATION MAP, ppb
3rd QUARTER FY 85
PLATE 28


EAST 104TH AVENUE
PORT LINE
SUMMIT DITCH
CANAL
HAVANA STREET
PEORIA STREET
15
14
22
23
26
27
EAST 96TH AVENUE
C STREET
D STREET
9TH AVENUE
RESERVOIR F
FIRST
2,000
1,000
500
100
10
100
10
<1.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE ASSIGNED FOR D
ROCKY MOUNTAIN ARSENAL/DENVER CITY, CO.

DESIGNED BY

DRAWN BY J.H. DILORIE
DATE

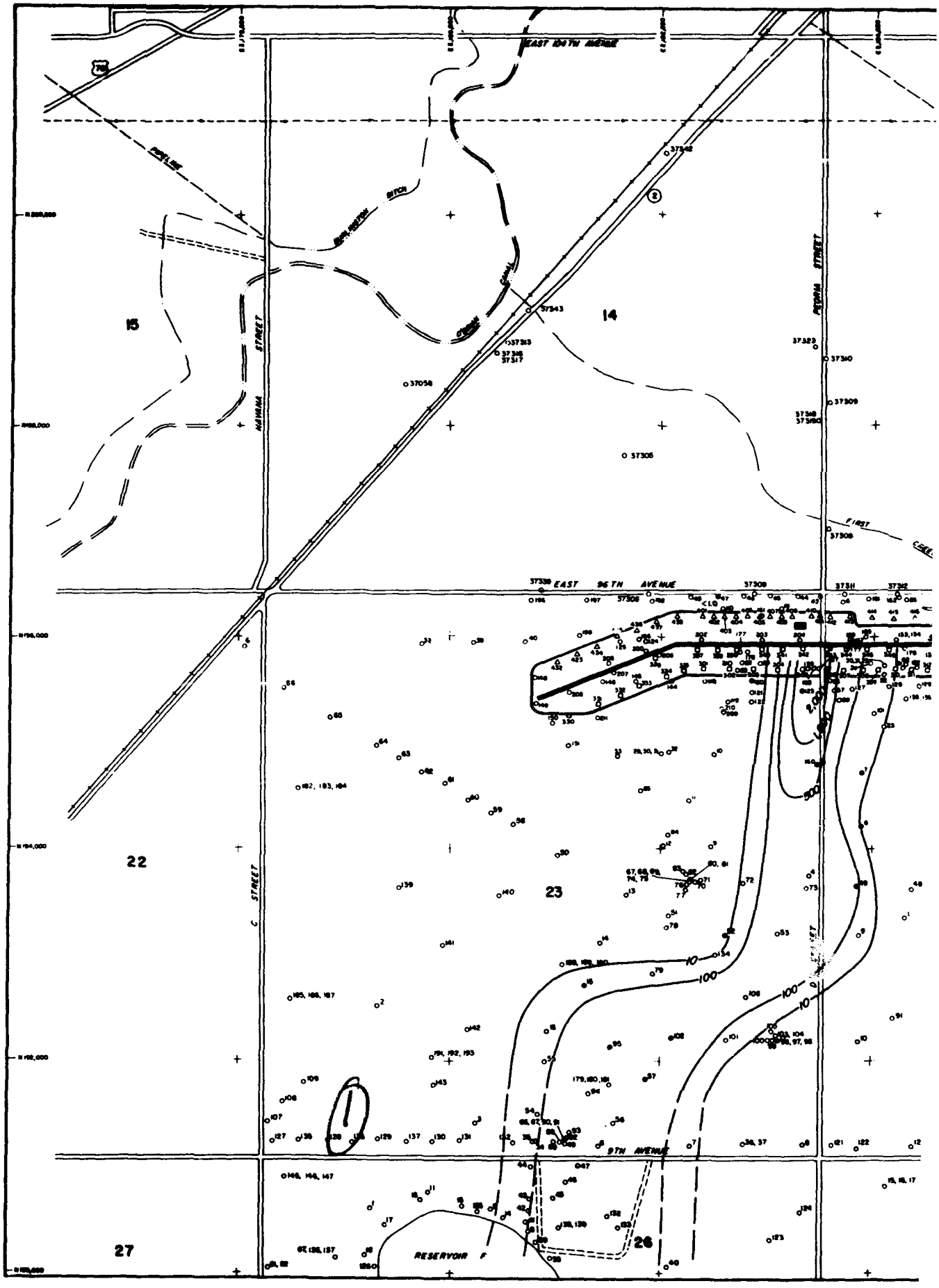
REVIEWED BY D.W. THOMPSON
DATE

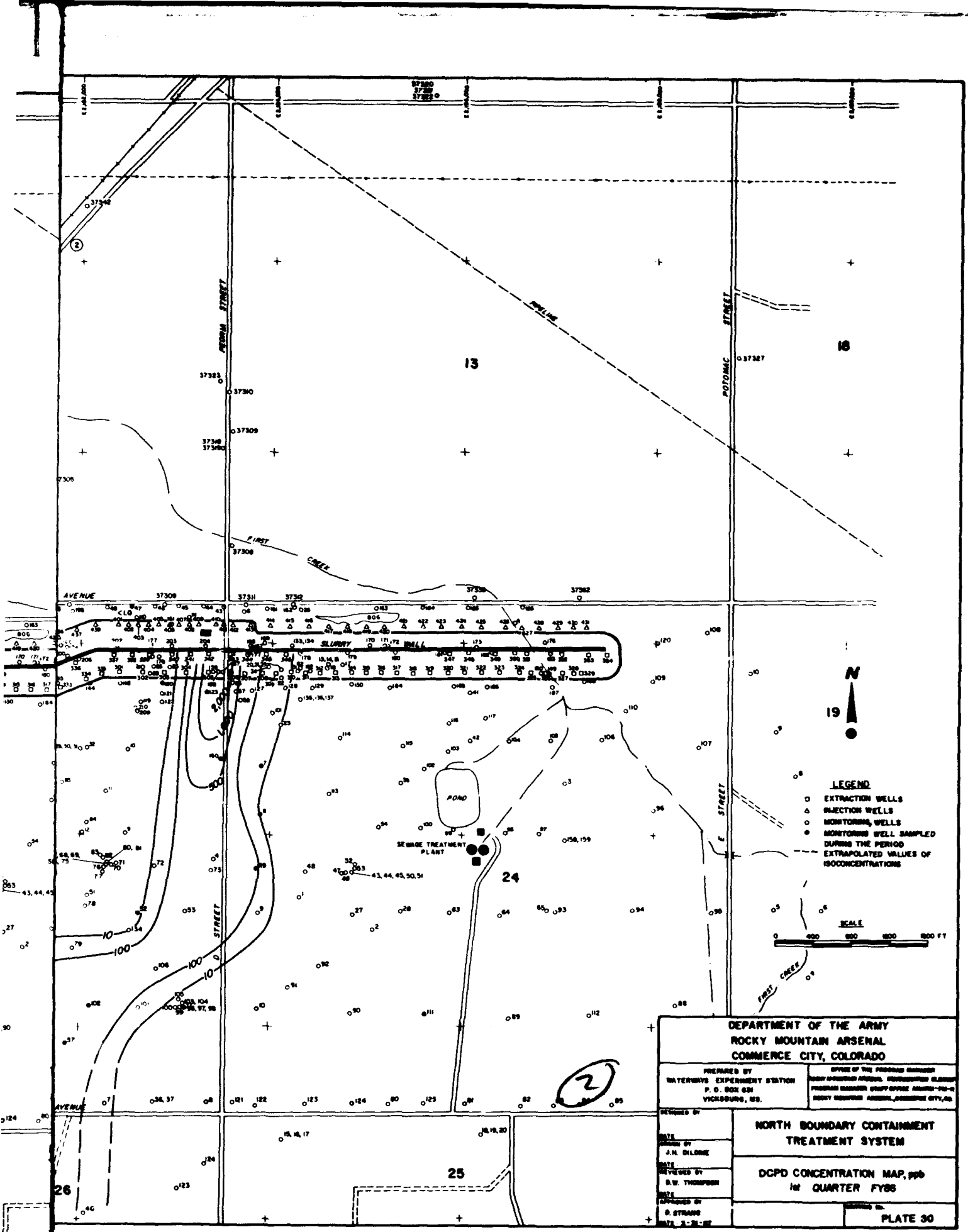
APPROVED BY D. STRAUB
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

DCPD CONCENTRATION MAP, ppb
4th QUARTER FY85

DRAWING No.
PLATE 29


EAST 104TH AVENUE
EAST 96TH AVENUE
96TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
RESERVOIR F
15
14
22
23
27
26
10
100
500



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

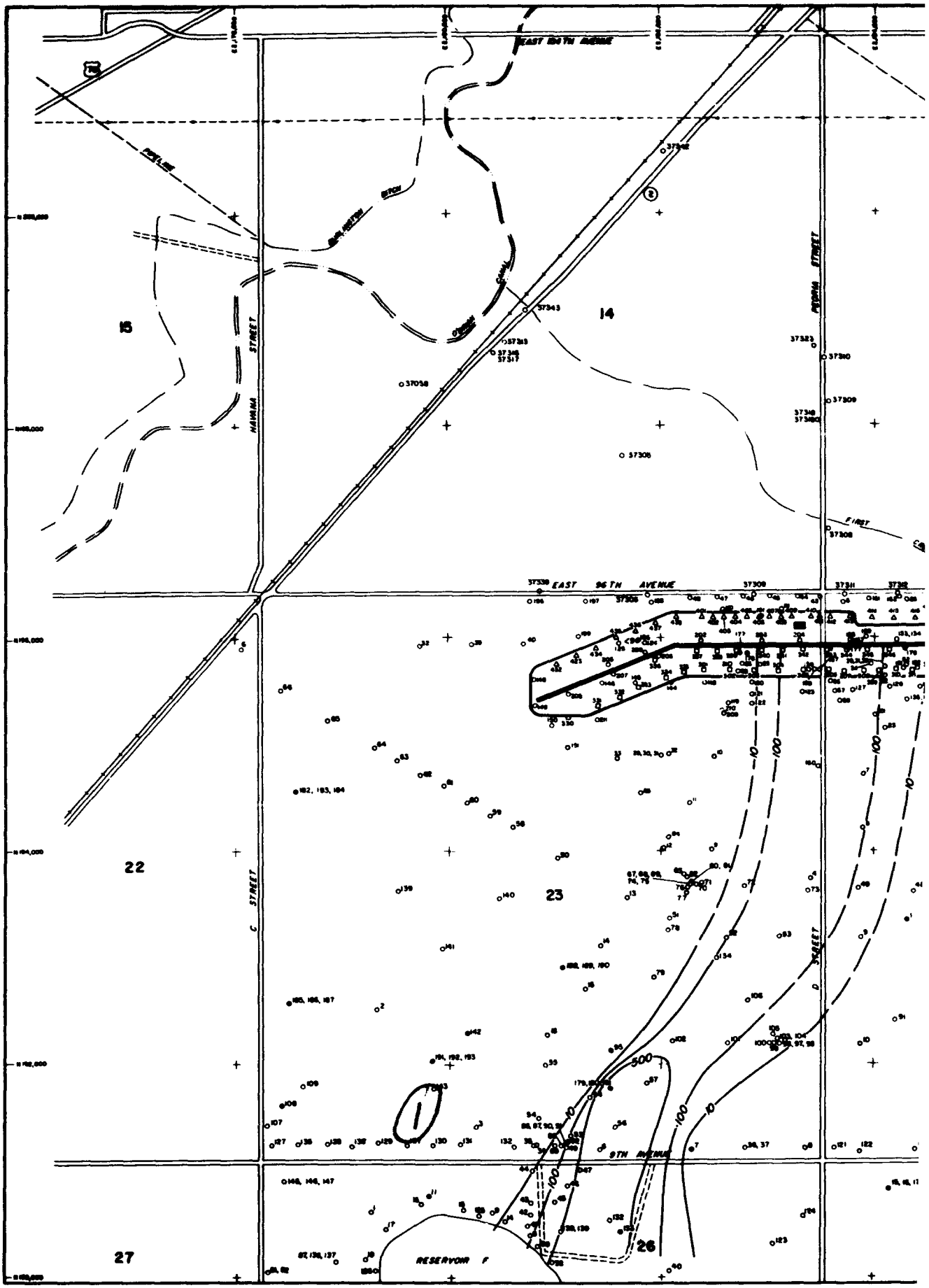
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
PROGRAM MANAGER STAFF OFFICE
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

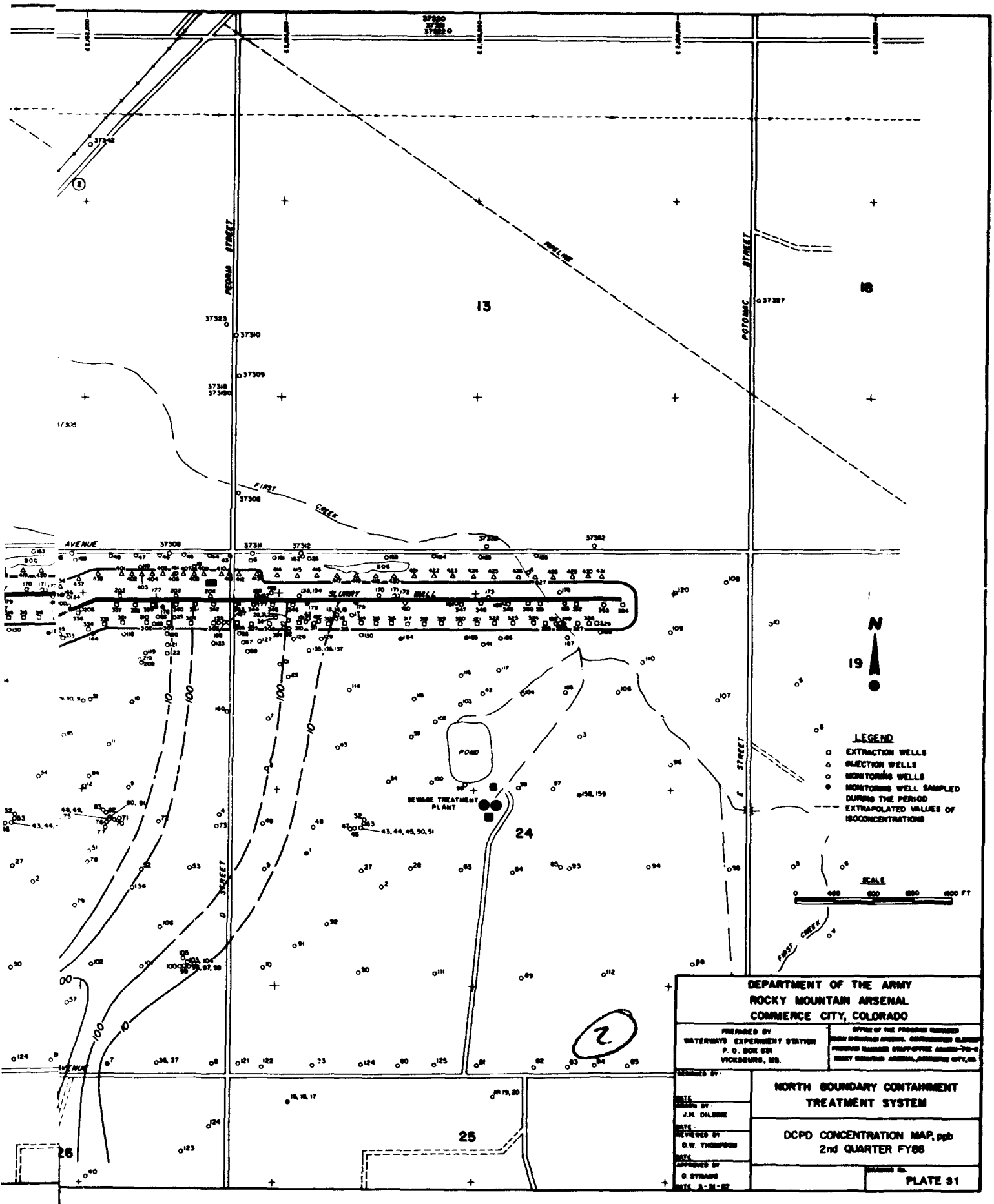
DESIGNED BY
DRAWN BY J.H. DILORIE
REVIEWED BY R.W. THOMPSON
APPROVED BY R. STRAUB
DATE 3-25-87

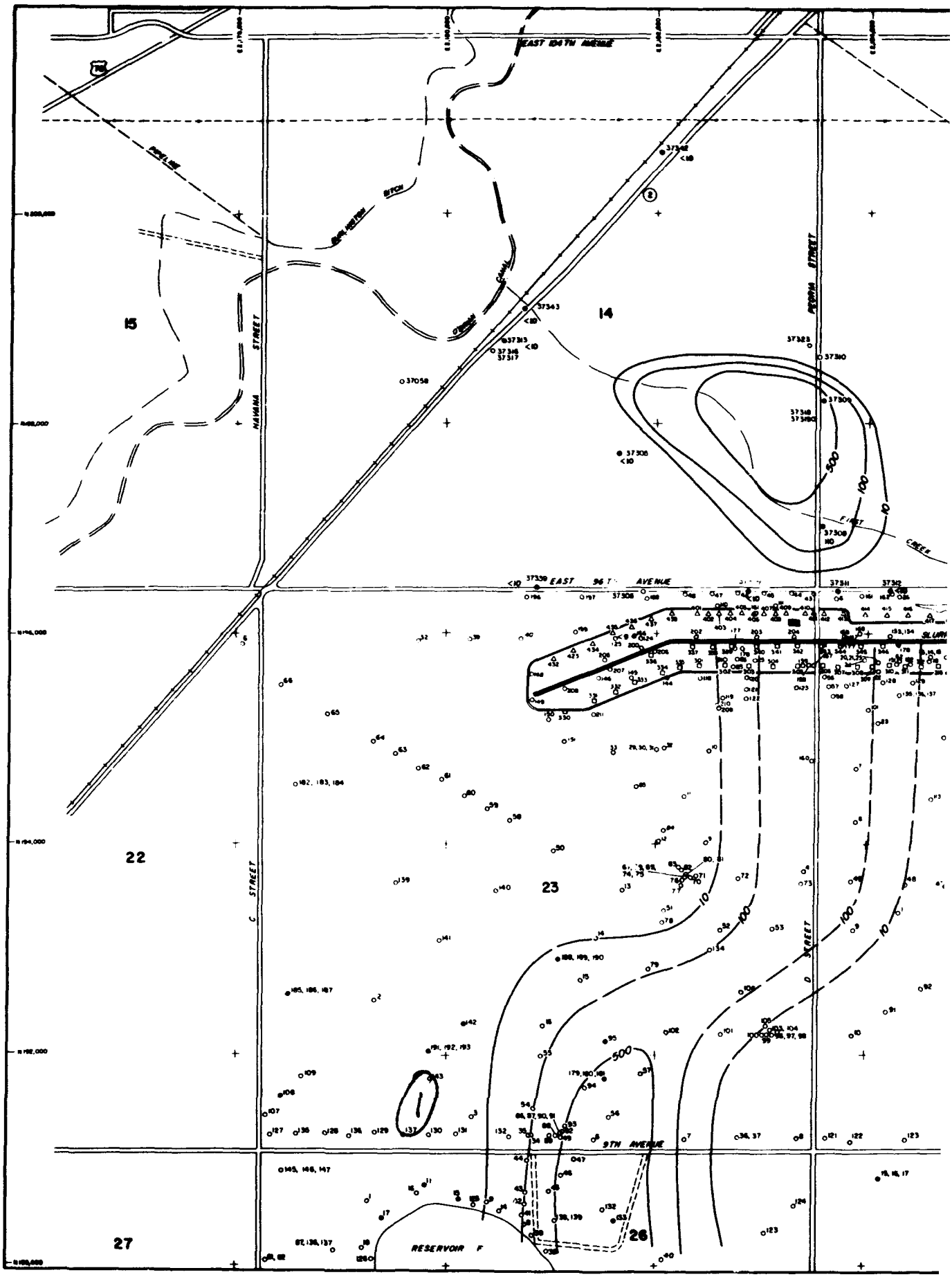
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

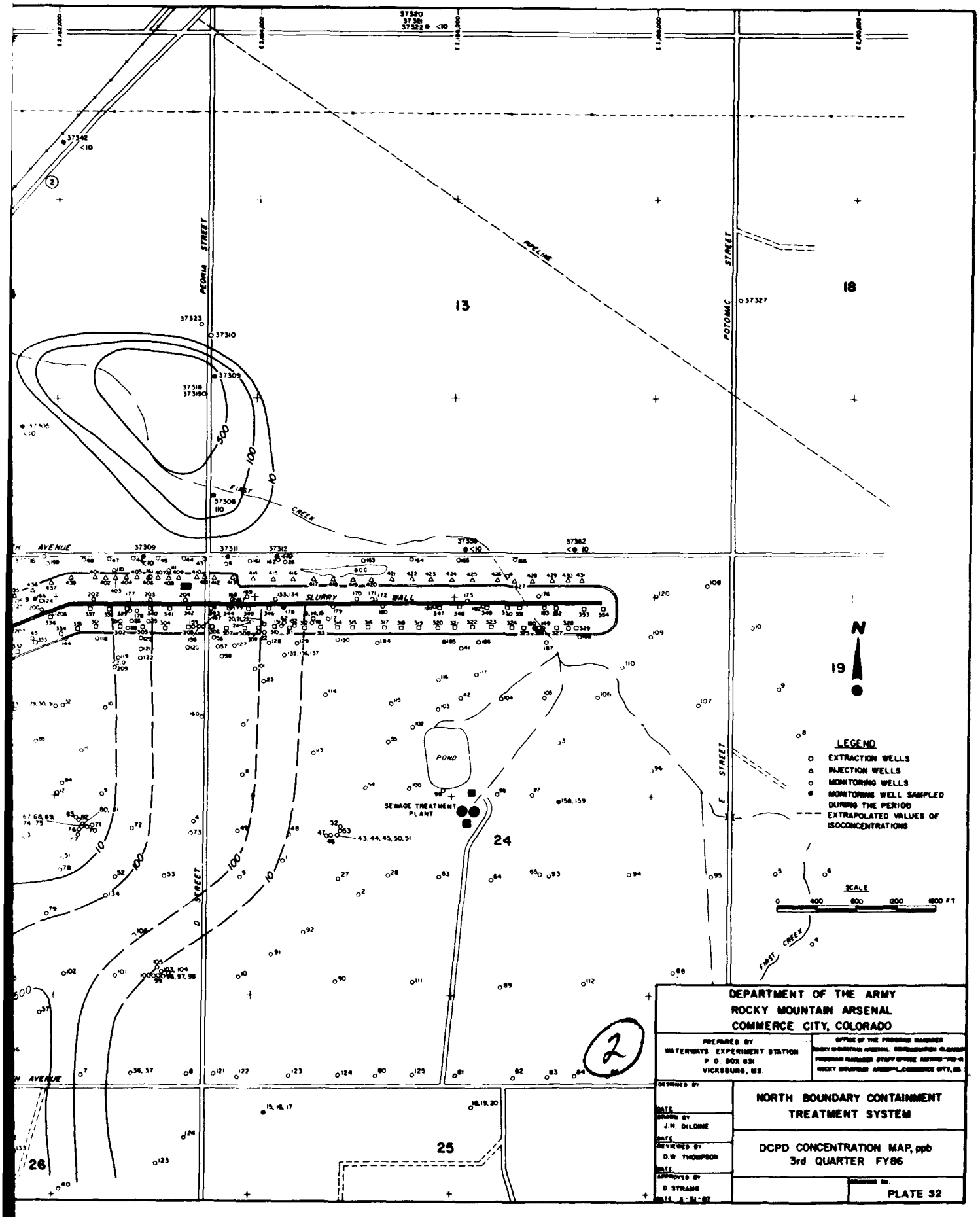
DCPD CONCENTRATION MAP, ppb
1st QUARTER FY86

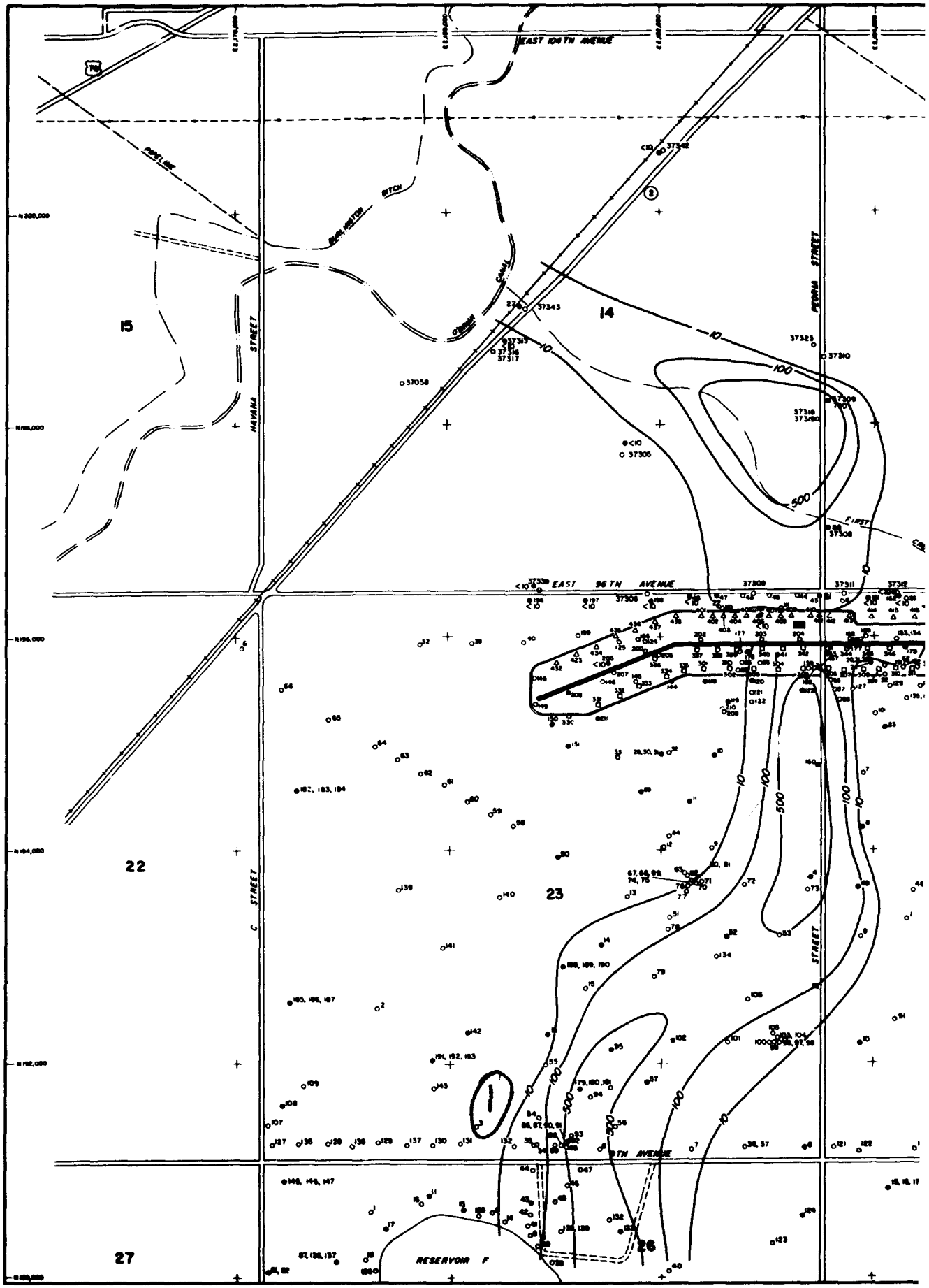
PLATE 30

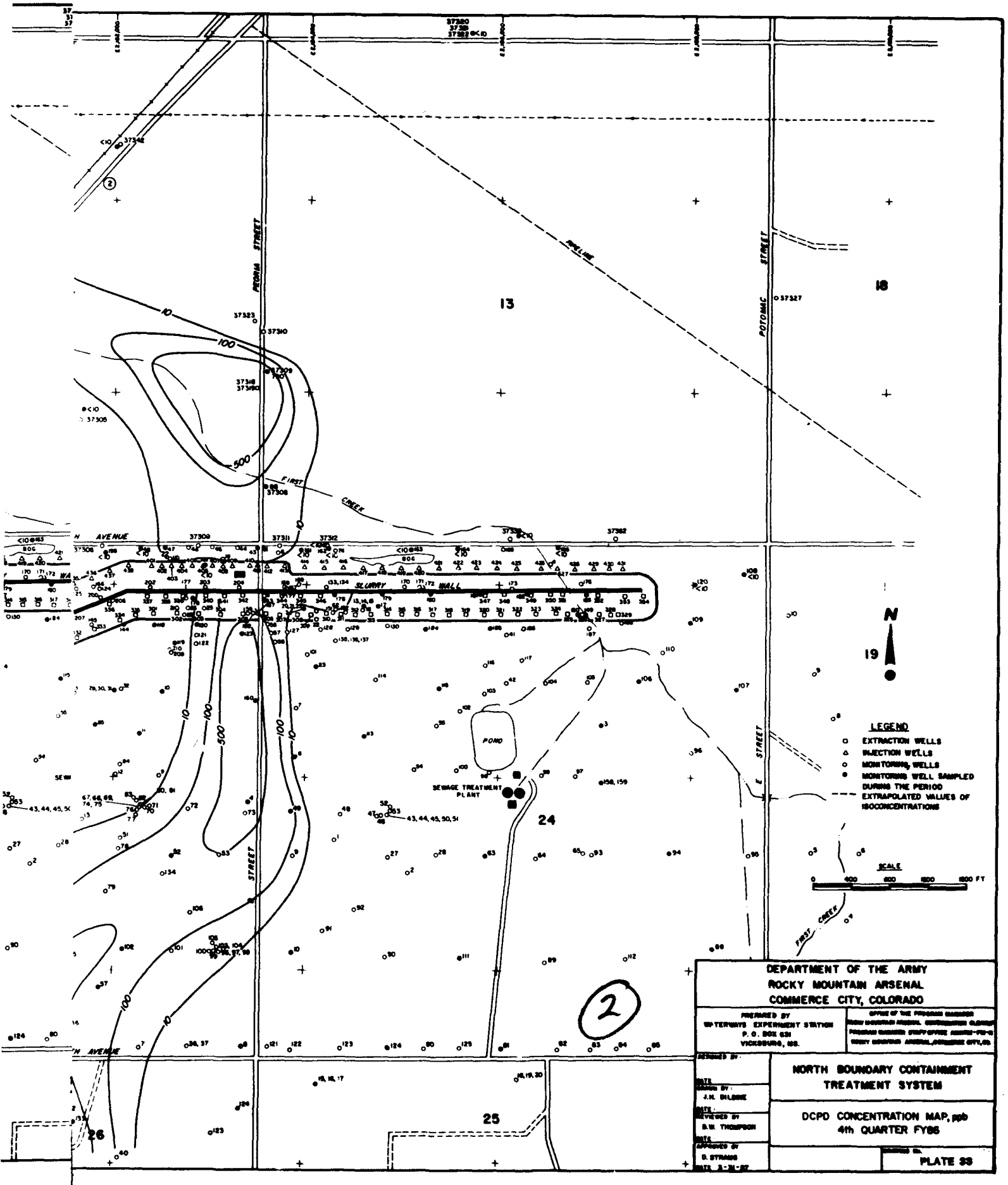

EAST 96TH AVENUE
EAST 96TH AVENUE
PENNA STREET
HAWAII STREET
C STREET
C STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
27
26
37343
37058
37306
37308
37309
37310
37339
37308
37308
37309
37310
37311
37312
37313
37314
37315
37316
37317
37318
37319
37320
37321
37322
37323
37324
37325
37326
37327
37328
37329
37330
37331
37332
37333
37334
37335
37336
37337
37338
37339
37340
37341
37342
37343
37344
37345
37346
37347

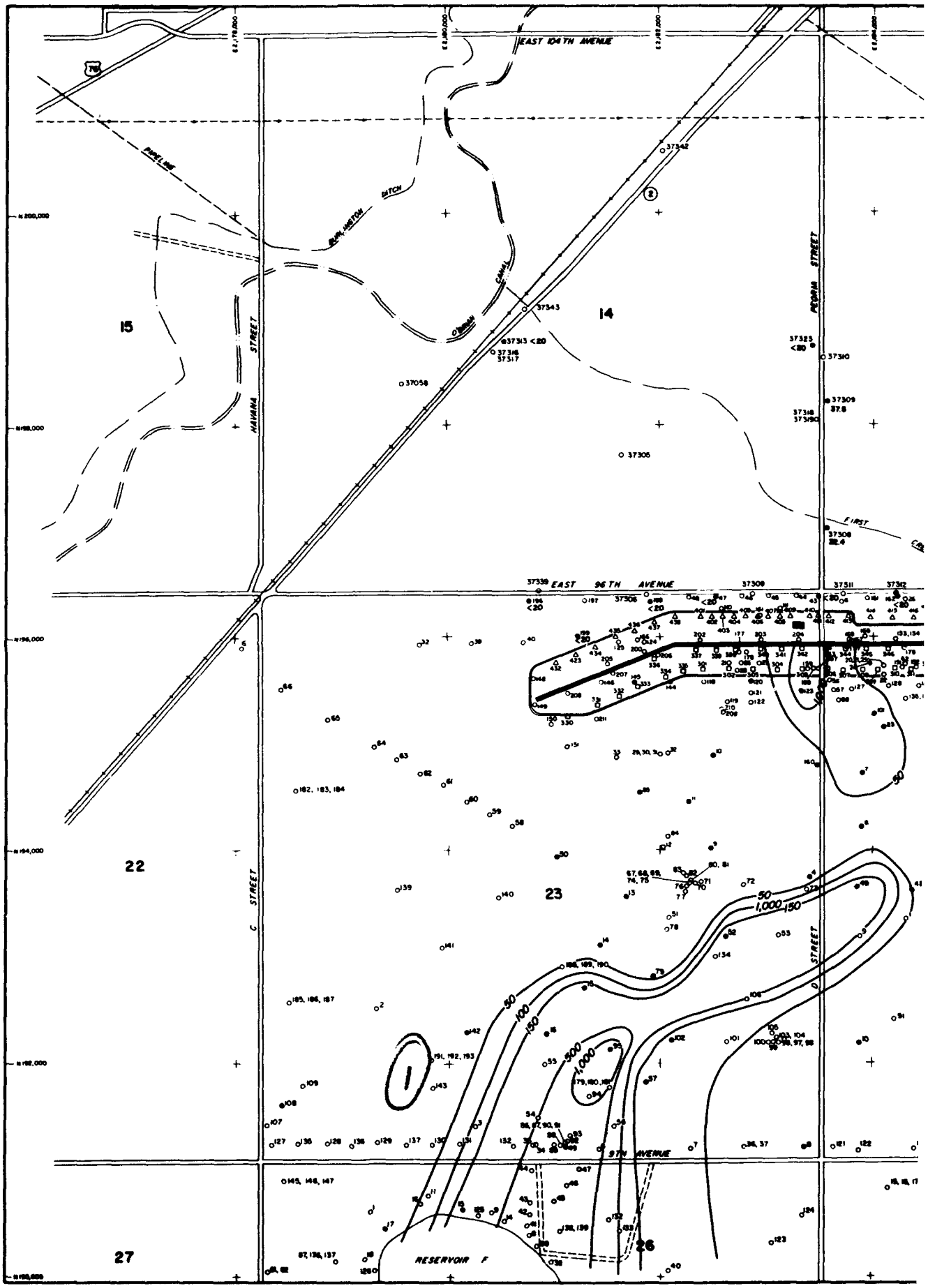

PEORIA STREET
POTOMAC STREET
FIRST CREEK
AVENUE
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MISS.
DESIGNED BY
DRAWN BY J.H. DILONE
REVIEWED BY D.W. THOMPSON
APPROVED BY G. STRAWN
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DCPD CONCENTRATION MAP, ppb
2nd QUARTER FY66
PLATE 31

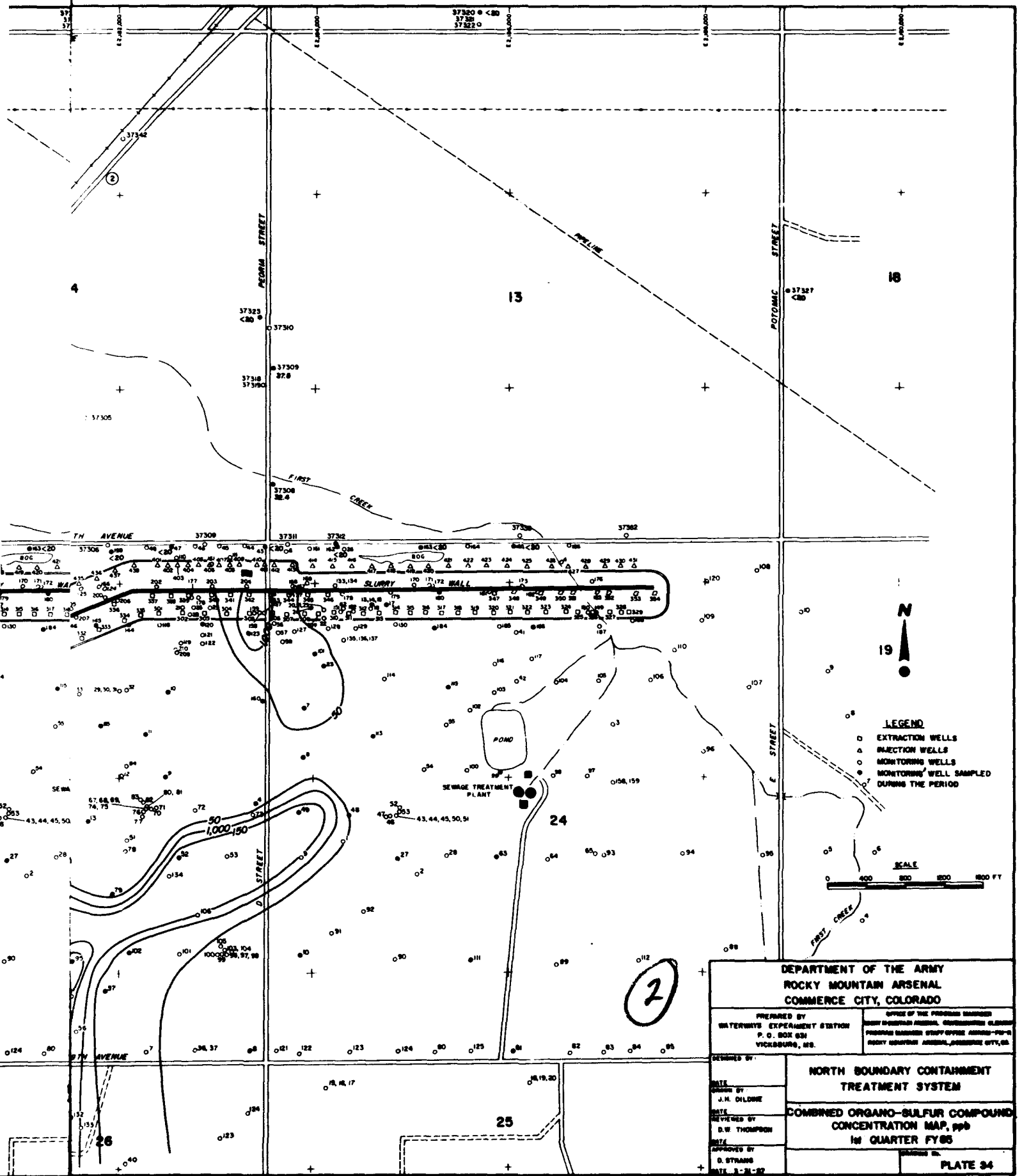

EAST 104TH AVENUE
PIPELINE
HIGH LINE DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
15
14
22
23
26
27
C STREET
E STREET
EAST 96TH AVENUE
9TH AVENUE
RESERVOIR F
37342
37343
37346
37347
37058
37323
37330
37309
37348
37349
37308
37339
37306
500
100
10


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P O BOX 631
VICKSBURG, MS
DESIGNED BY
DRAWN BY
J.M. DILORIE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
D. STRAUB
DATE 3-31-87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DCPD CONCENTRATION MAP, ppb
3rd QUARTER FY86
PLATE 32


EAST 104TH AVENUE
PORT LINE
BOX HOLTON DITCH
Canal
HAVANA STREET
PEORIA STREET
15
14
22
23
27
26
EAST 96TH AVENUE
G STREET
STREET
RESERVOIR F
10
100
500
1000
37342
37343
37323
37310
37317
37058
37305
37309
37339
37306
37311
37312


PEORIA STREET
POTOMAC STREET
E STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
10
100
500
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1600 FT
N
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY
J.H. DILDINE
REVIEWED BY
B.W. THOMPSON
APPROVED BY
D. STRAWN
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DCPD CONCENTRATION MAP, ppb
4th QUARTER FY86
PLATE 38


EAST 104TH AVENUE
EAST 96TH AVENUE
96TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
O STREET
BURLINGTON DITCH
O'BRIAN CANAL
FIRST
RESERVOIR F
15
14
22
23
27
26
50
100
150
500
1,000
1,000
37342
37343
37343 <20
37316
37317
37058
37306
37323
<20
37310
37309
37.8
37316
37318
37308
22.4
37339
37309
37311
37312
37306
<20
<20



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

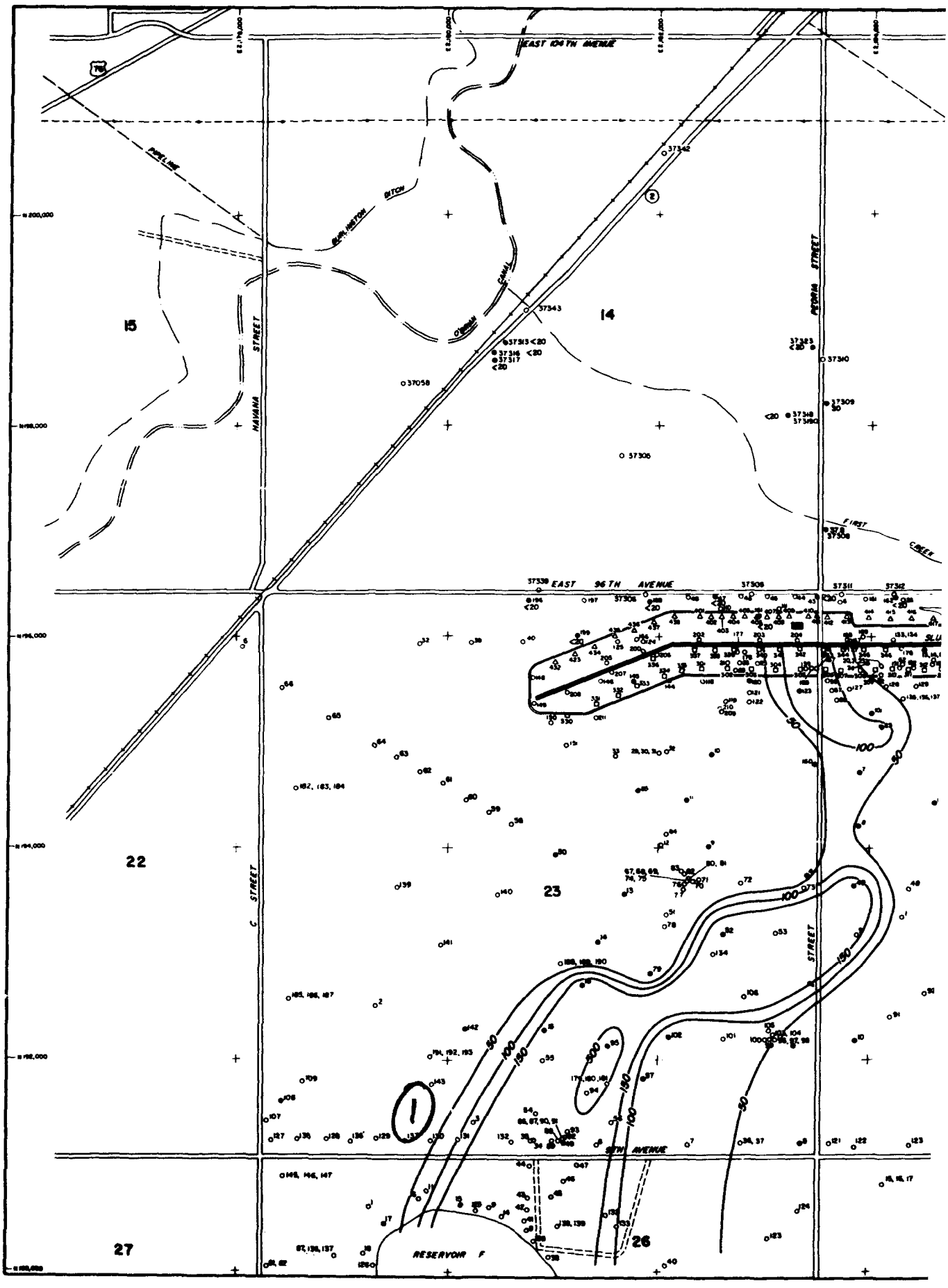
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

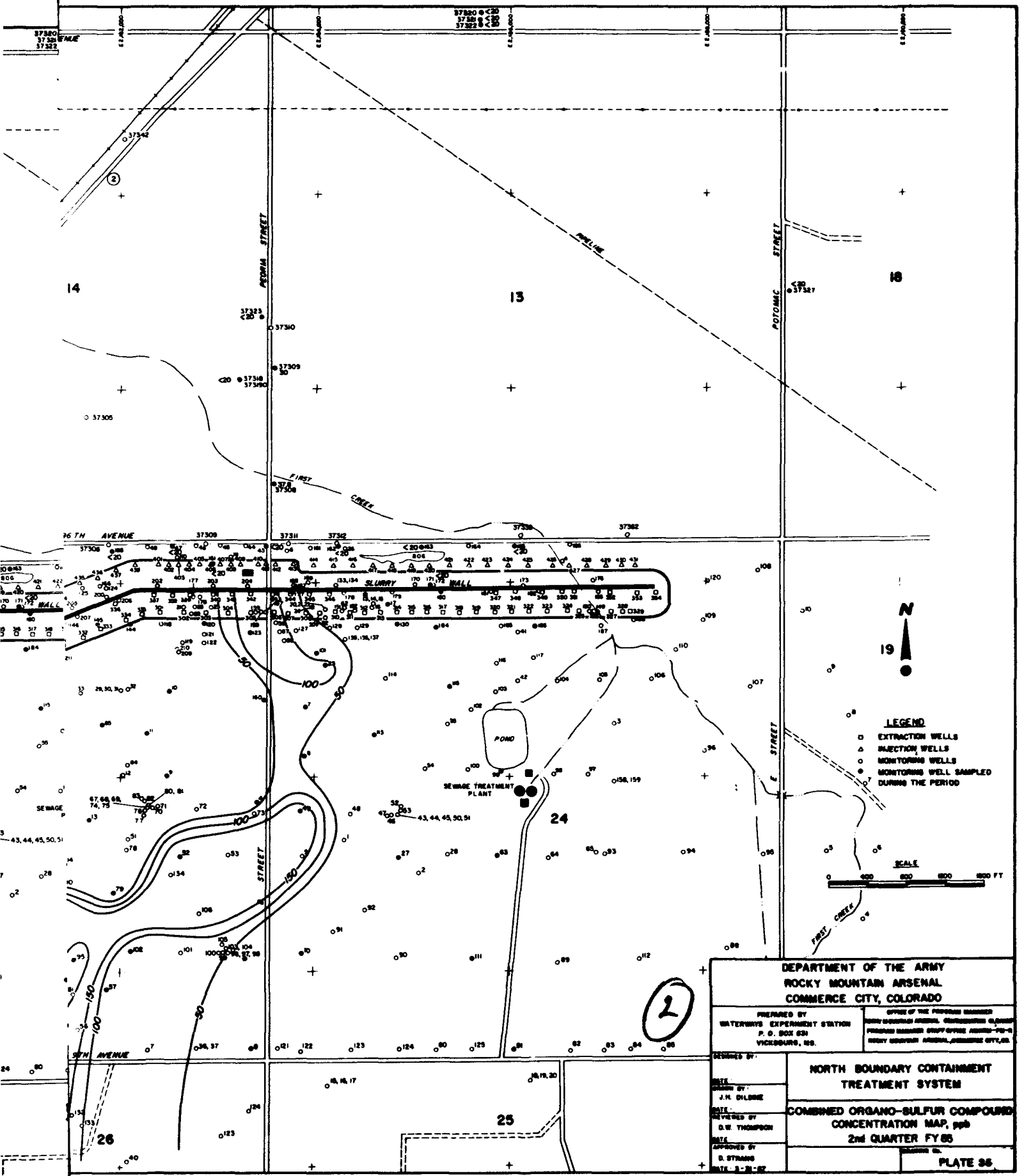
DESIGNED BY
DATE
DRAWN BY J.H. DILDINE
DATE
REVIEWED BY B.W. THOMPSON
DATE
APPROVED BY D. STRAUB
DATE 3-24-67

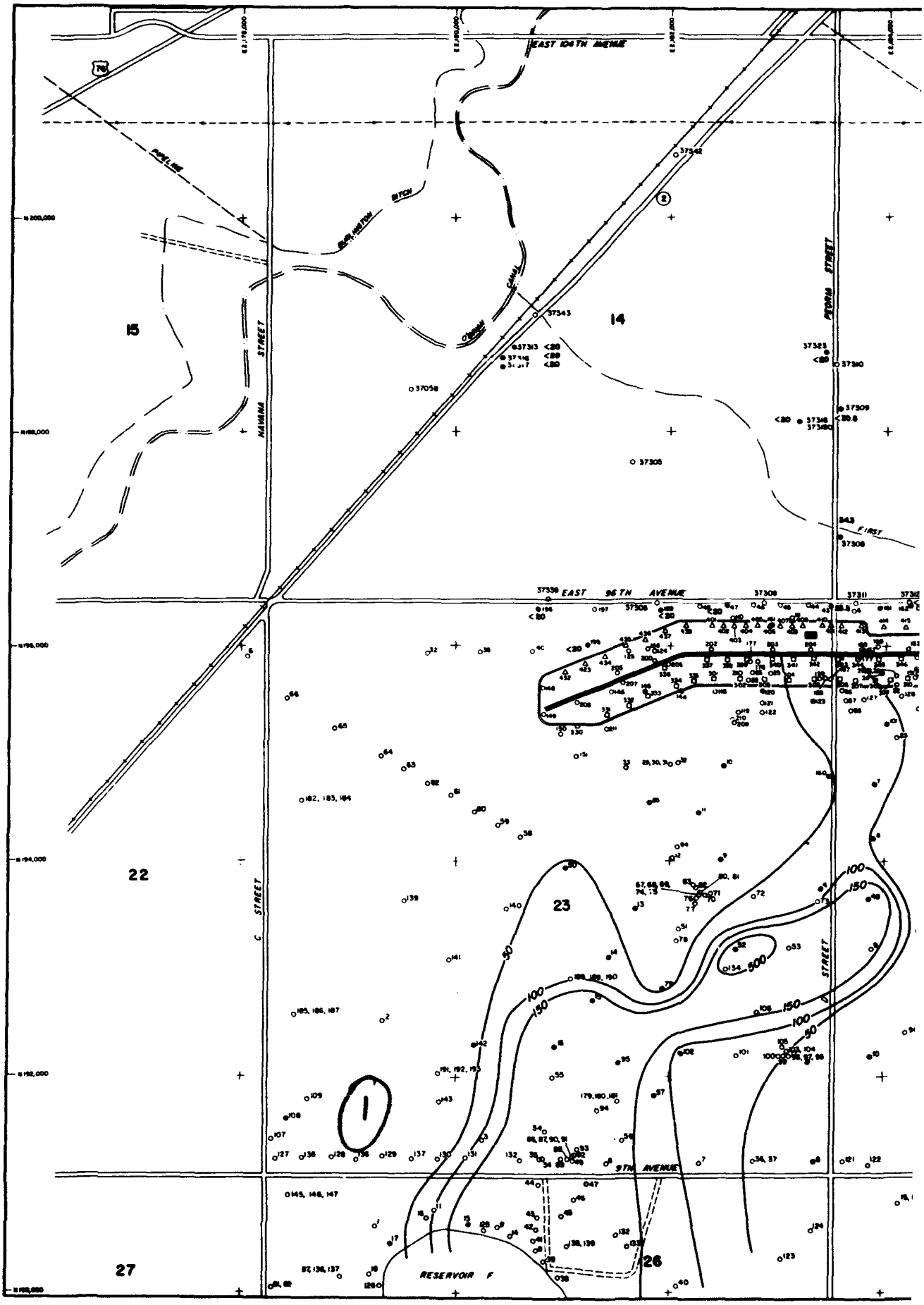
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

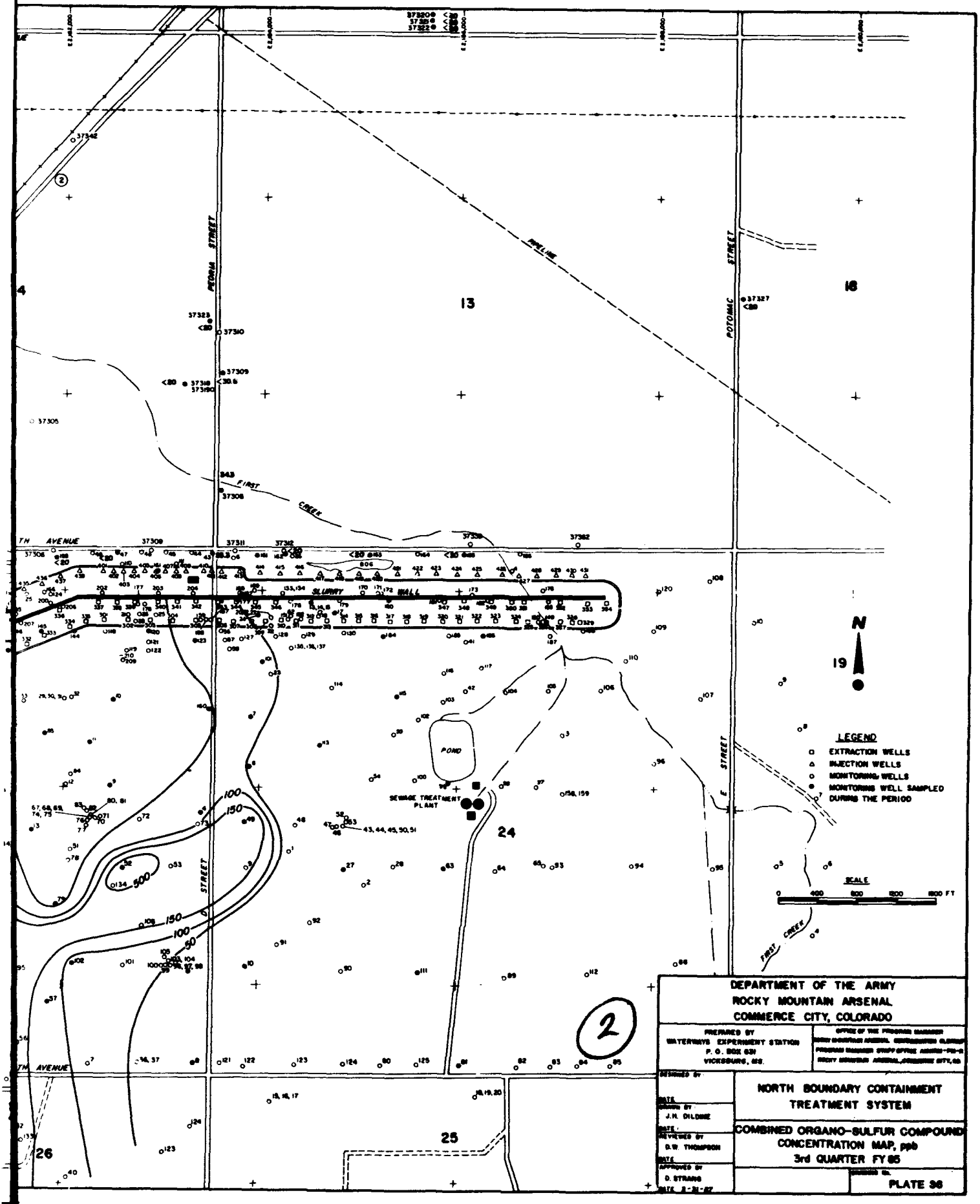
COMBINED ORGANO-SULFUR COMPOUND CONCENTRATION MAP, ppb
1st QUARTER FY66

DRAWING No.
PLATE 34


EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
C STREET
STREET
RESERVOIR F
15
14
22
23
27
26
37342
37343
37058
37306
37340
37309
37338
37339
37311
37312
37313 <20
37316 <20
37317 <20
37348
37349
50
100
150
200


96TH AVENUE
PEORIA STREET
POTOMAC STREET
E STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
SEWAGE
13
14
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1600 2400 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM
COMBINED ORGANO-SULFUR COMPOUND
CONCENTRATION MAP, ppb
2nd QUARTER FY 85
PLATE 35


EAST 104TH AVENUE
PIPE LINE
RIVER DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
15
14
22
23
27
26
C STREET
EAST 96TH AVENUE
9TH AVENUE
RESERVOIR F
37343
37058
37306
37339
37308
37311
37309
37310
37321
37348
37348A
37313
37316
37317
<80
100
150
500
50
1



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

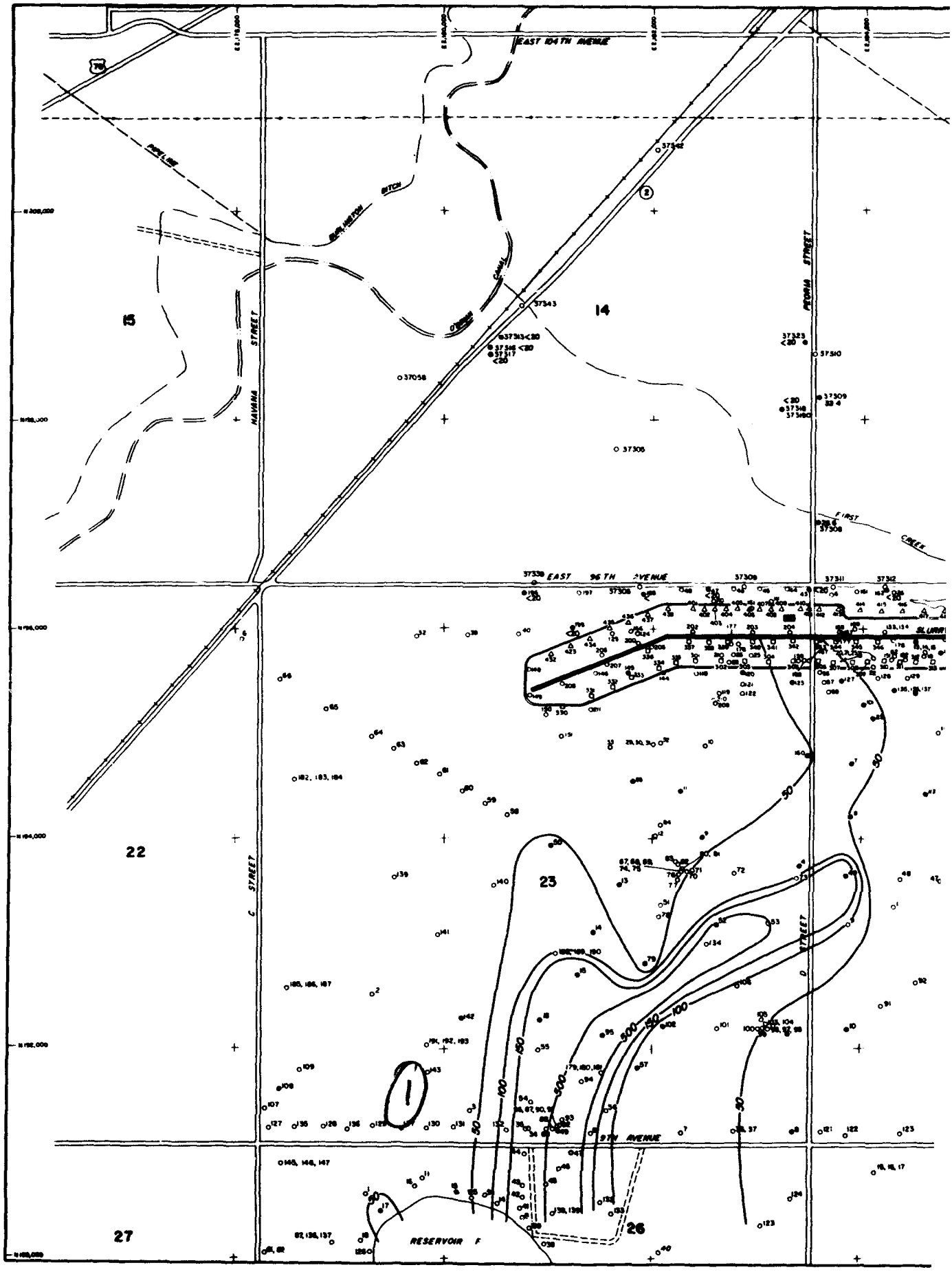
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER'S STAFF OFFICE ARMCO-PEO-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

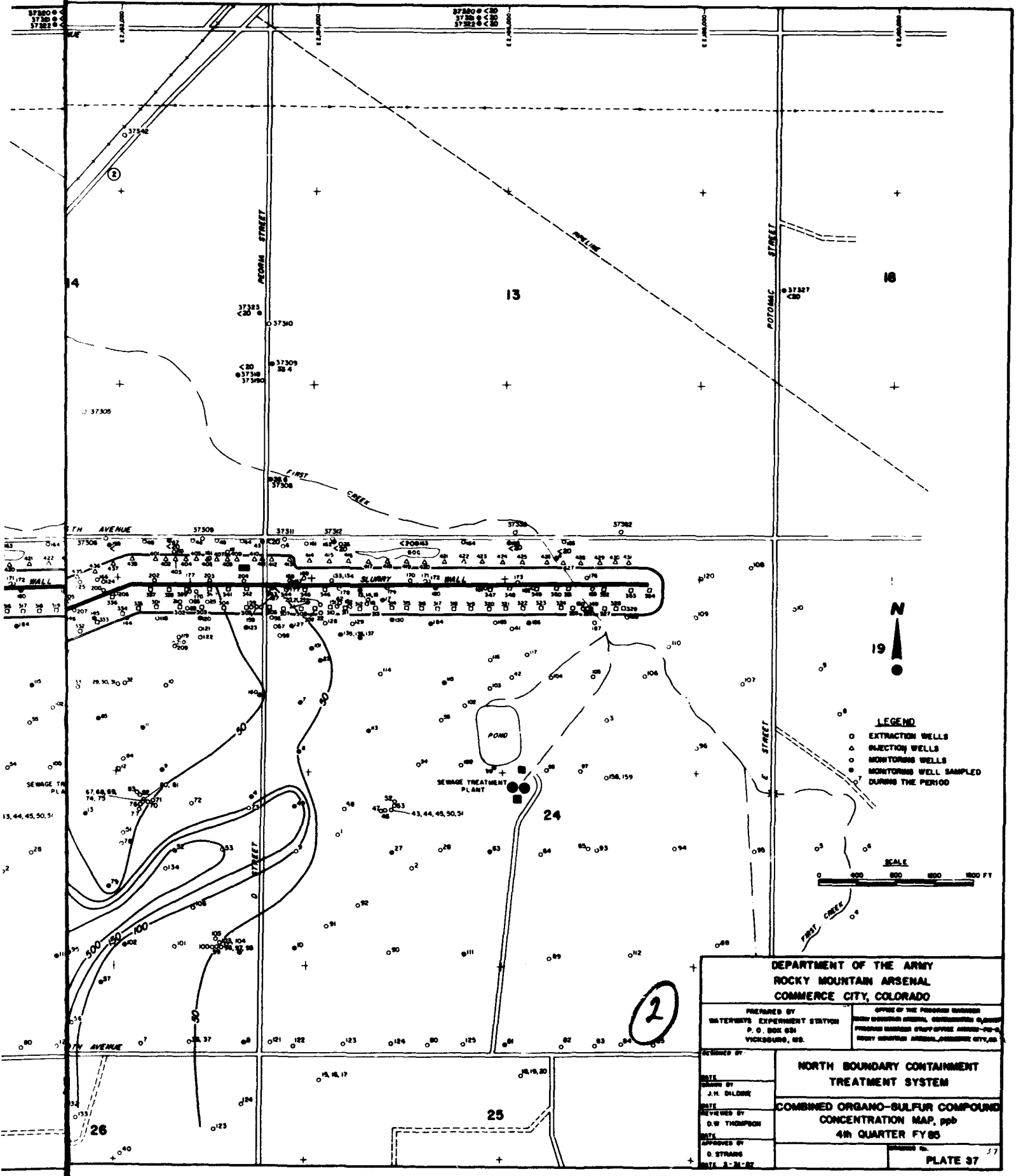
DESIGNED BY
DATE
DRAWN BY
J.H. DILDINE
DATE
REVIEWED BY
D.W. THOMPSON
DATE
APPROVED BY
D. STRANO
DATE 8-24-87

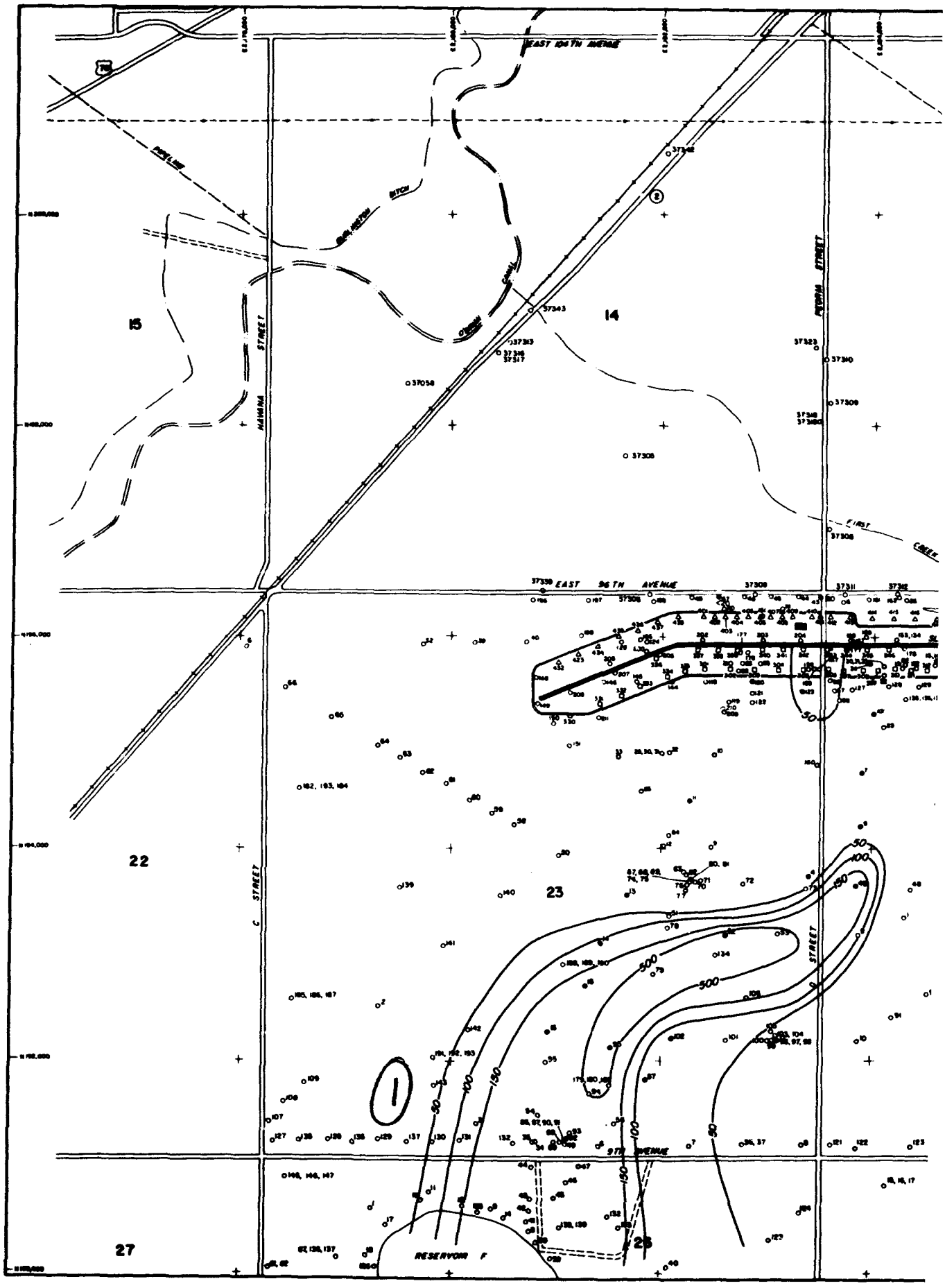
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

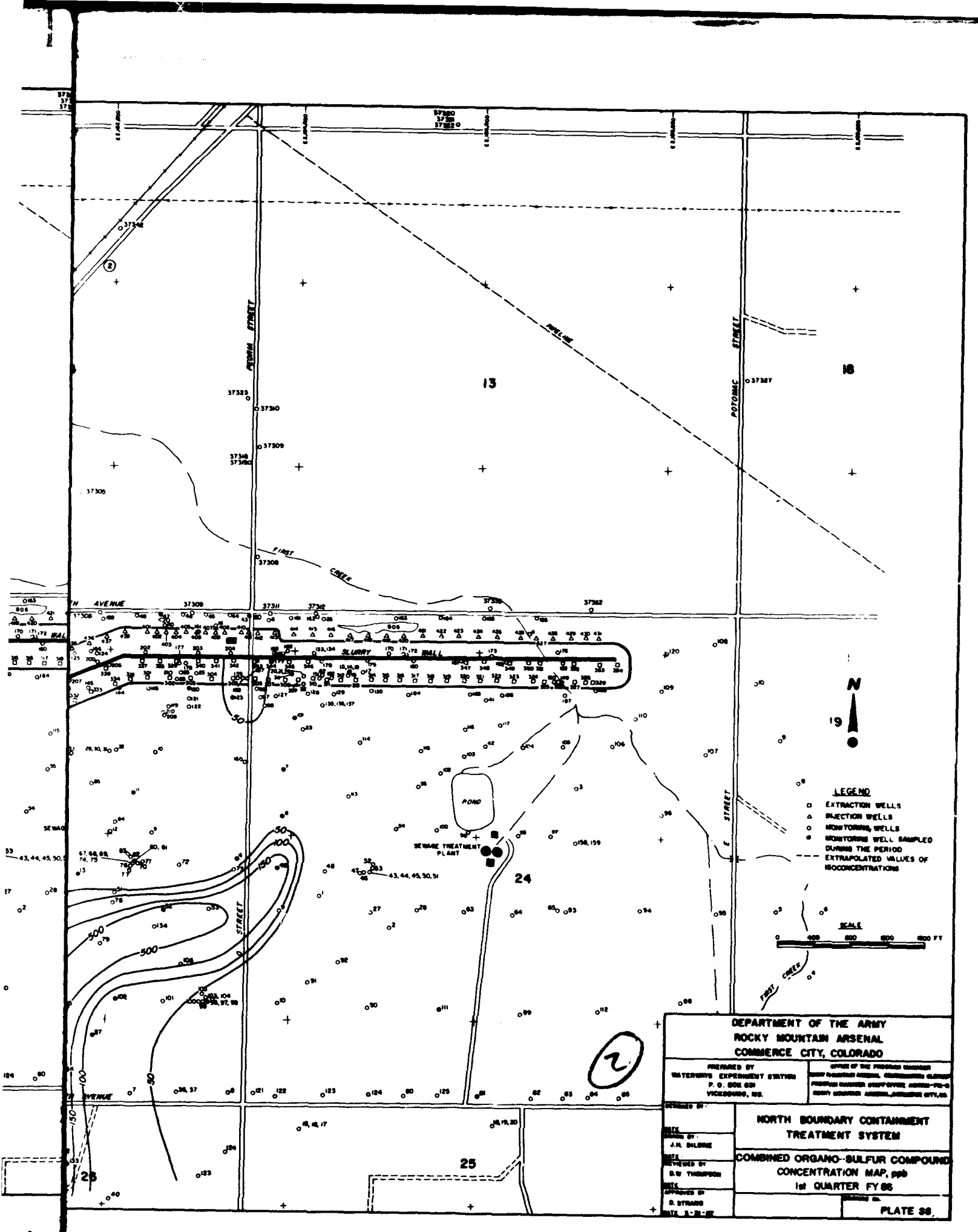
COMBINED ORGANO-SULFUR COMPOUND CONCENTRATION MAP, ppb
3rd QUARTER FY 85

DRAWING NO.
PLATE 36


EAST 104TH AVENUE
PIPELINE
HENDERSON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
C STREET
Q STREET
96TH AVENUE
RESERVOIR F
15
14
22
23
27
26
1
2
37343
37343<20
37346 <20
37317 <20
37058
37306
37308
37309
37310
37311
37312
37323 <20
37338
37339
37340
37341
37342
50
100
500


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
14
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
COMBINED ORGANO-SULFUR COMPOUND CONCENTRATION MAP, ppb
4th QUARTER FY 85
J.H. DILORIE
D.W. THOMPSON
D. STRAHS
PLATE 37


EAST 104TH AVENUE
PIPELINE
SOUTH PLATTE RIVER DITCH
O'BRIEN CANAL
HAVANA STREET
PEORIA STREET
15
14
22
23
27
28
EAST 96TH AVENUE
C STREET
RESERVOIR F
50
100
150
500



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MISS.

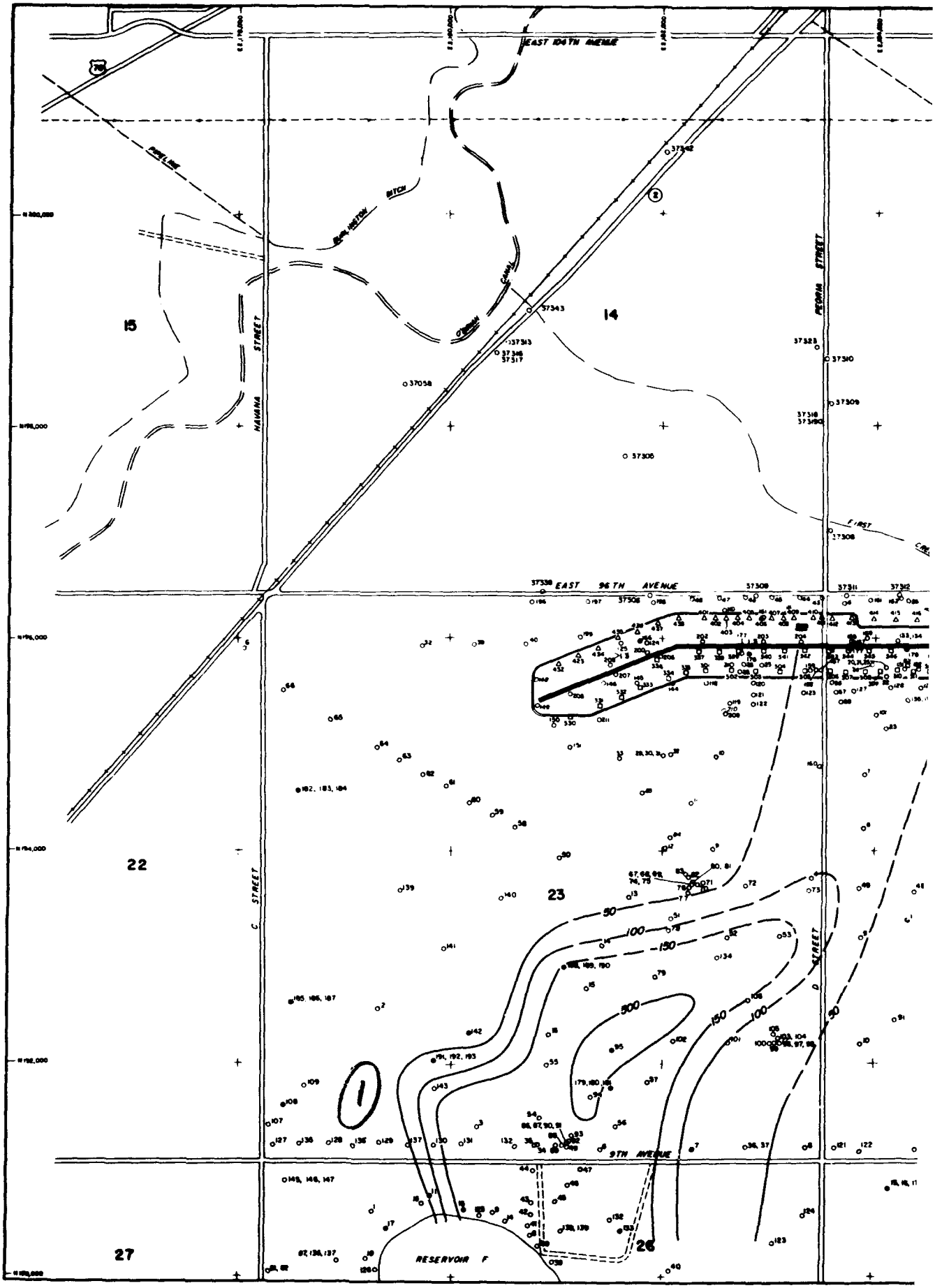
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
PROGRAM MANAGER (DEPUTY FOR AGENT-FOR-CO)
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

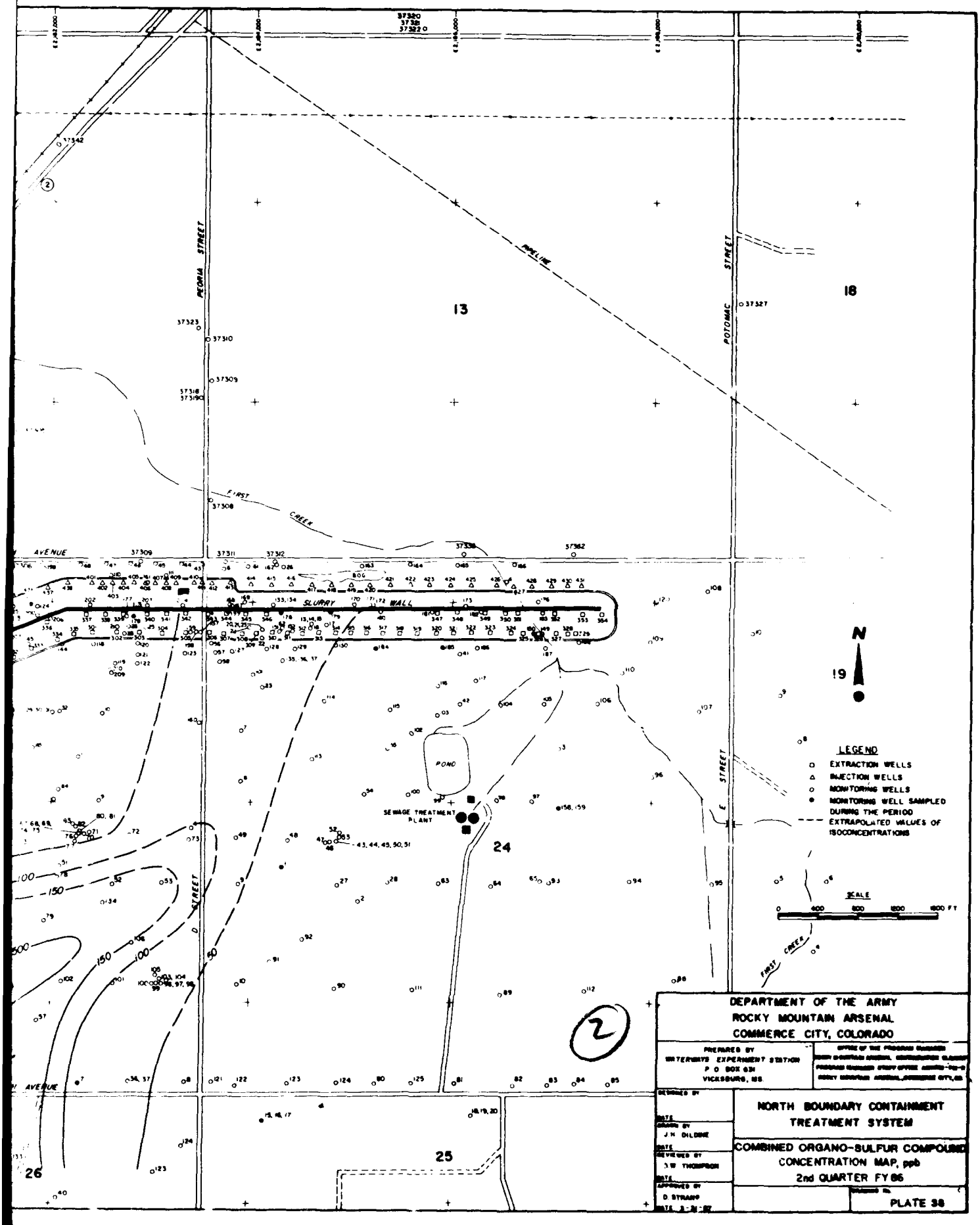
DESIGNED BY:
DATE:
DRAWN BY: J.R. DILDINE
DATE:
REVIEWED BY: B.W. THOMPSON
DATE:
APPROVED BY: D. STRAND
DATE: 3-31-65

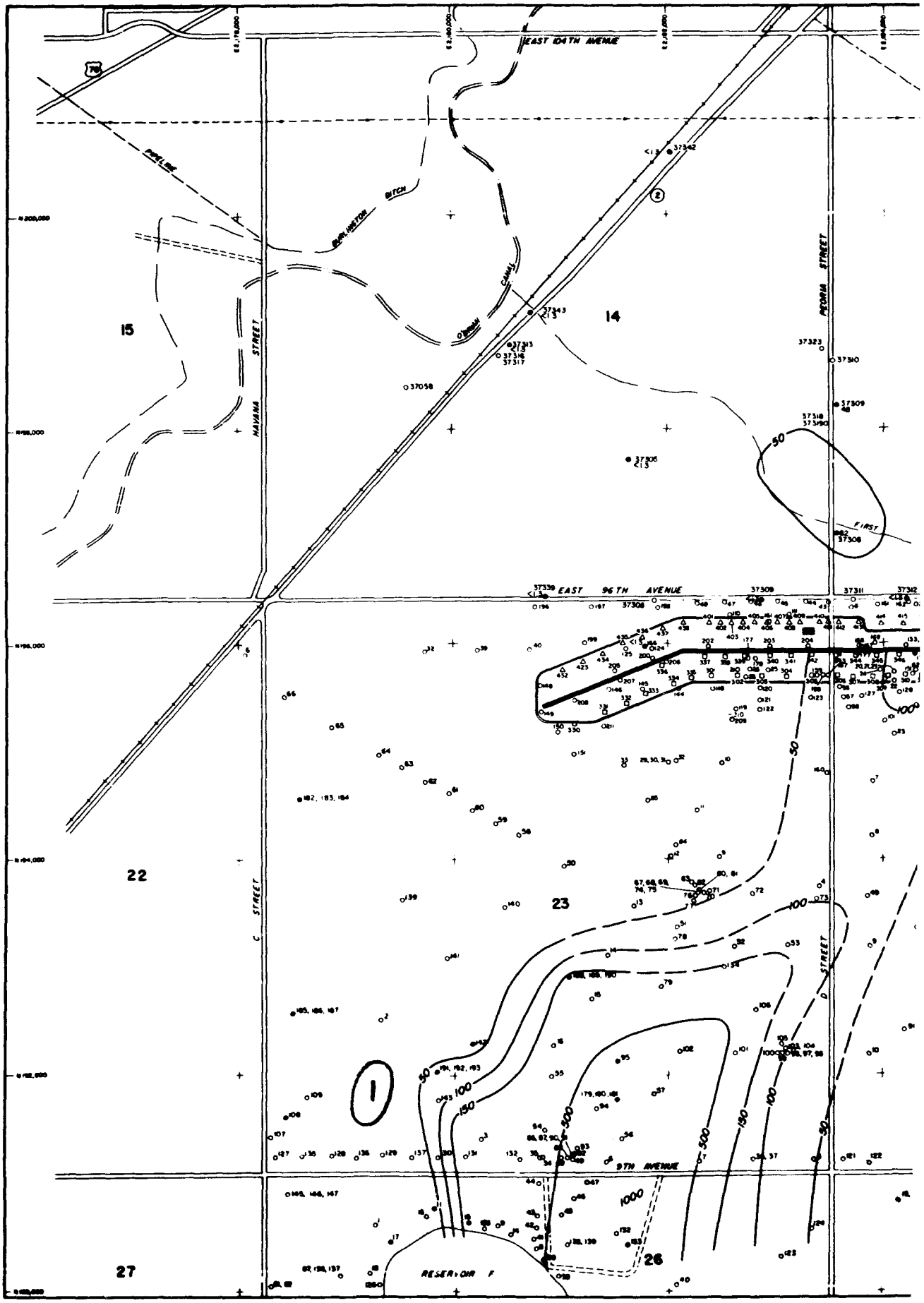
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

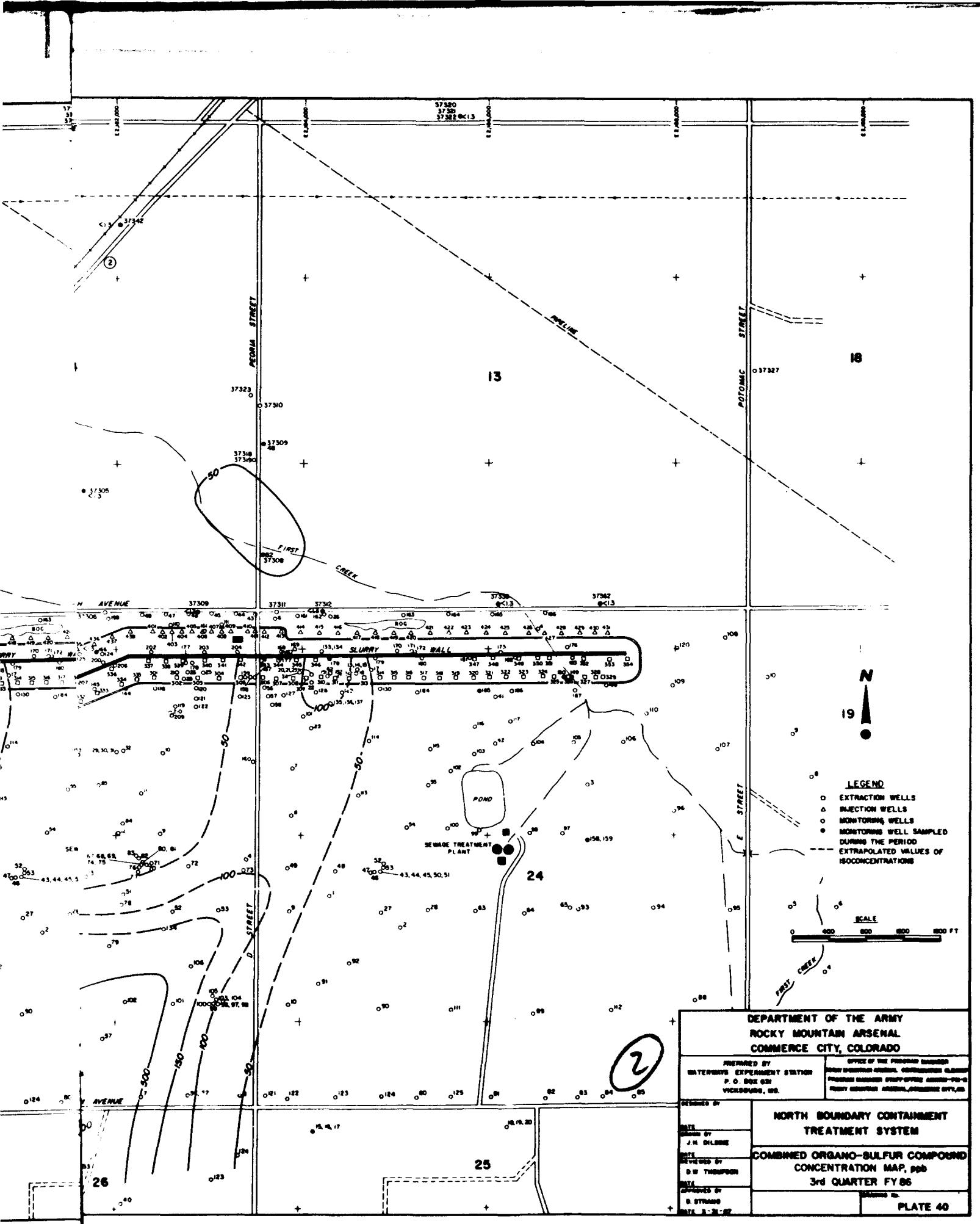
COMBINED ORGANO-SULFUR COMPOUND CONCENTRATION MAP, ppb
1st QUARTER FY 65

DRAWING No.
PLATE 38


EAST 104TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
EAST 96TH AVENUE
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
50
100
150
500
1


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P O BOX 631
VICKSBURG, MS
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
COMBINED ORGANO-SULFUR COMPOUND CONCENTRATION MAP, ppb
2nd QUARTER FY86
J H DILDINE
S W THOMPSON
D STRAMP
PLATE 38


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
HAVANA STREET
PEORIA STREET
C STREET
D STREET
PIPELINE
BURLINGTON DITCH
O'BRIAN CANAL
FIRST
RESERVOIR F
15
14
22
23
26
27
1
2
50
100
150
500
1000



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

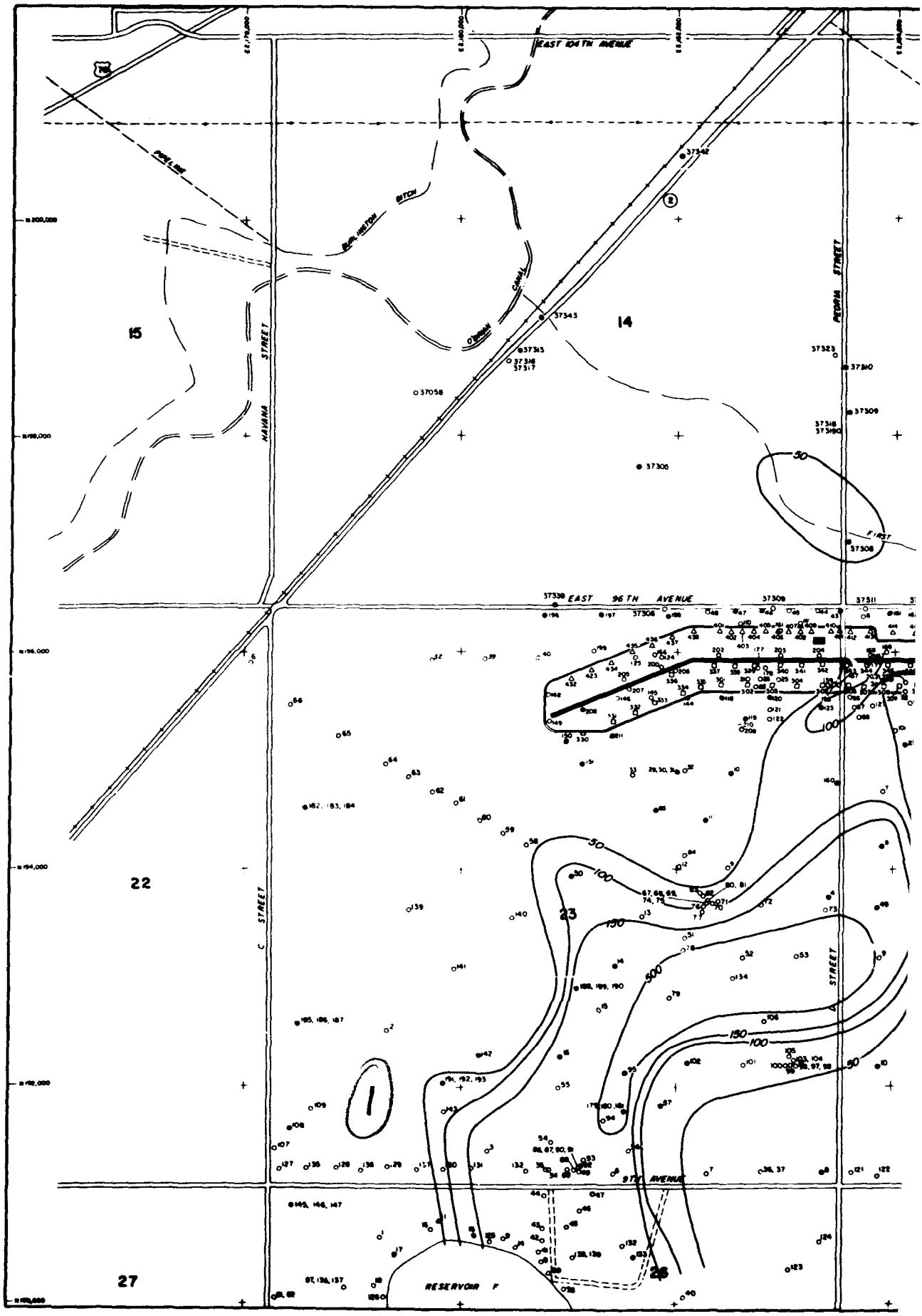
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
PROGRAM MANAGER (PROVISIONAL) ARMY-FOR-O
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

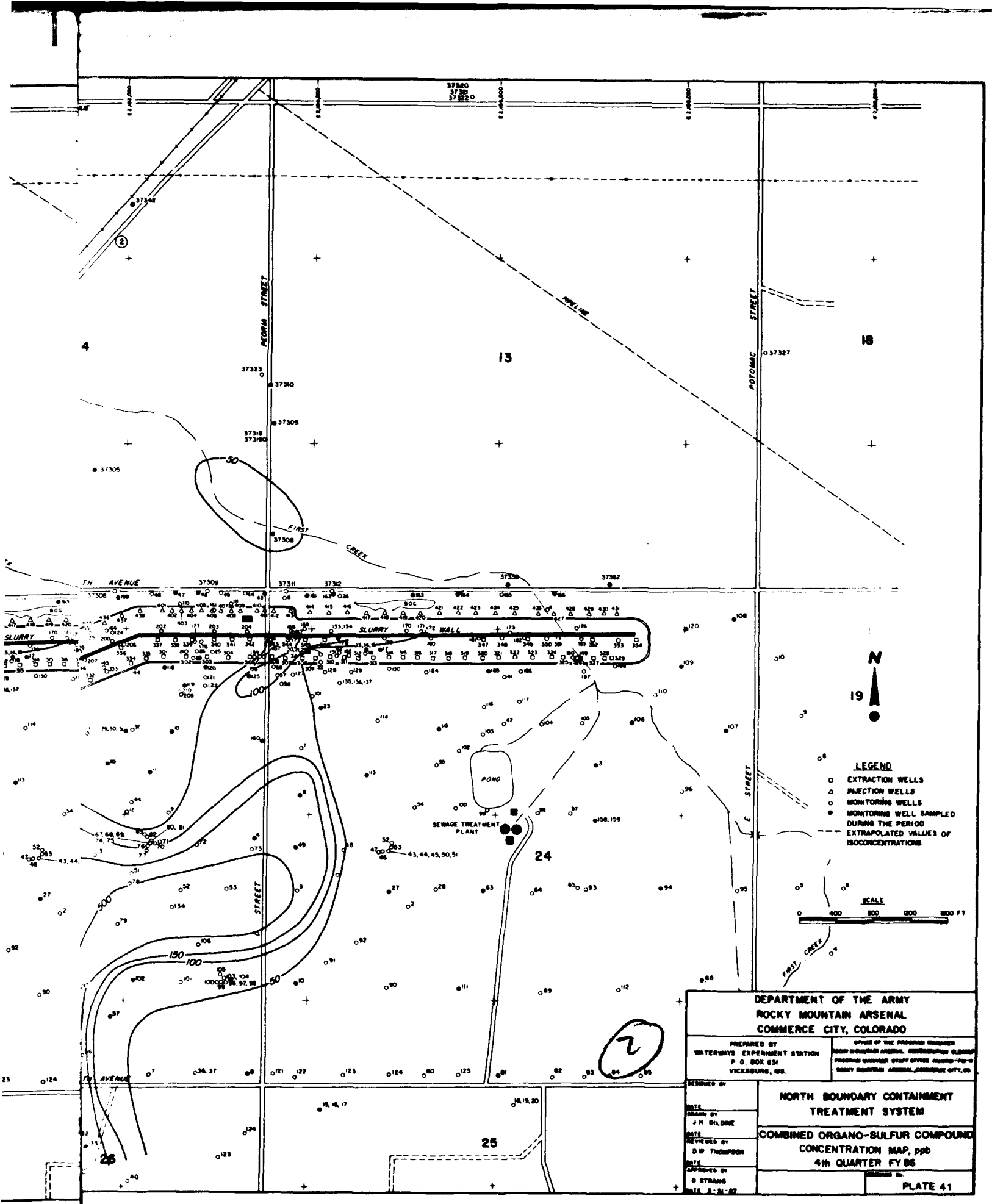
DESIGNED BY
DATE
DRAWN BY J.H. GILLIAM
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY D. STRAUB
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

COMBINED ORGANO-SULFUR COMPOUND CONCENTRATION MAP, ppb
3rd QUARTER FY 86

DRAWING No.
PLATE 40


EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
C STREET
RESERVOIR F
15
14
22
23
27
26
1
50
100
150
200
37342
37343
37345
37316
37317
37058
37306
37308
37309
37310
37523
37339
37308
37311



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

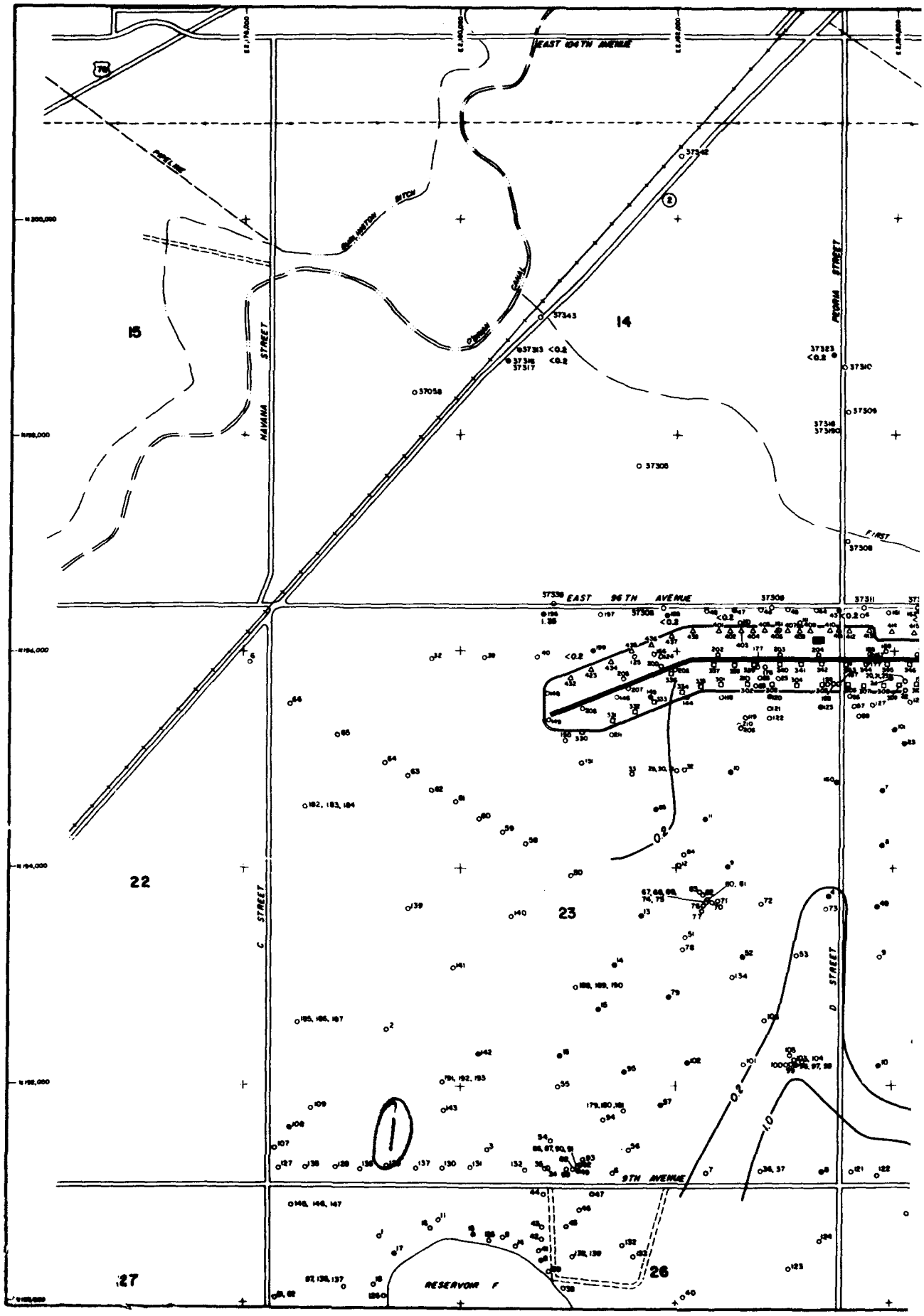
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

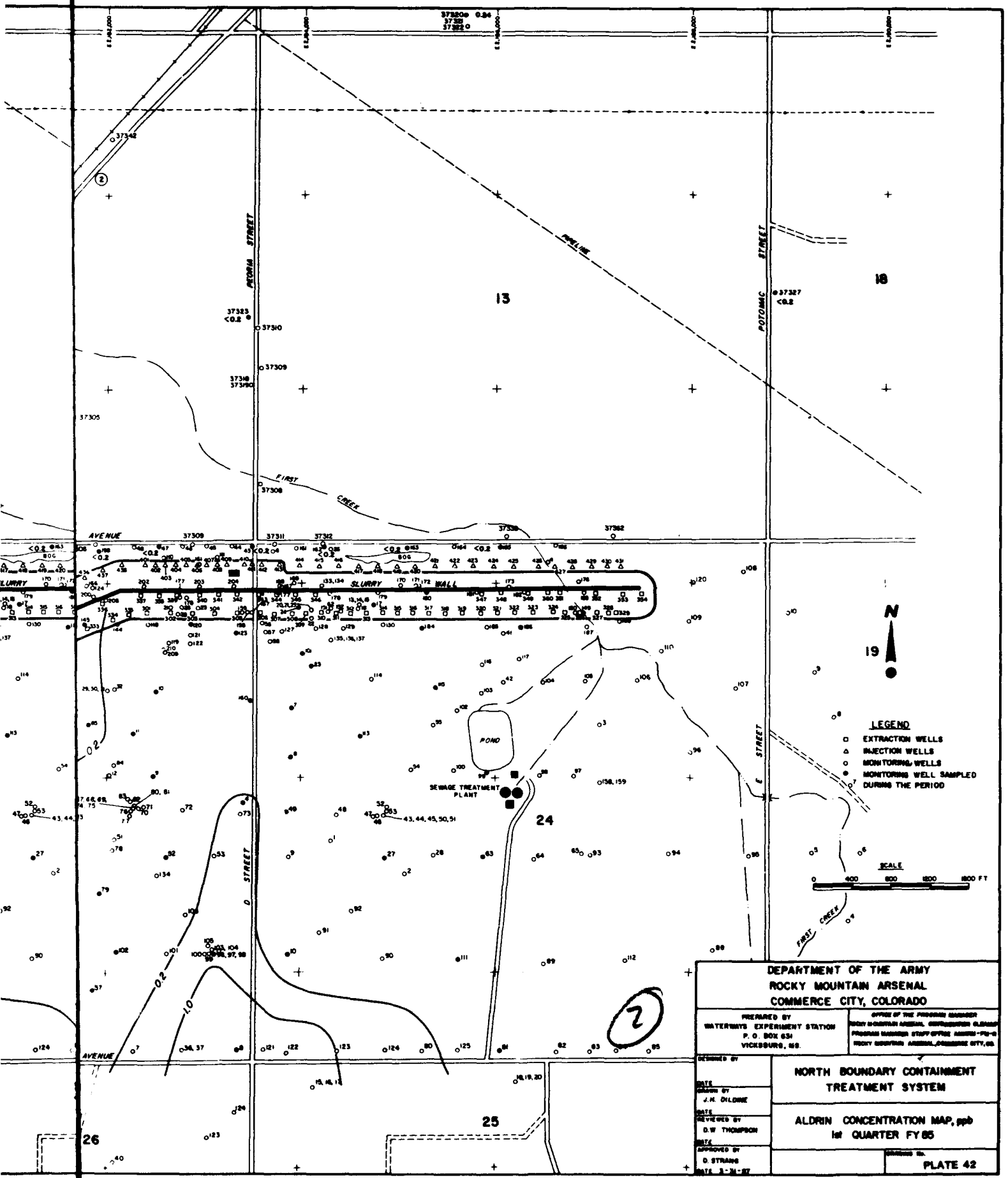
DESIGNED BY
DATE
DRAWN BY J H DILDINE
DATE
REVIEWED BY D W THOMPSON
DATE
APPROVED BY D STRAUB
DATE 3-24-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

COMBINED ORGANO-SULFUR COMPOUND CONCENTRATION MAP, ppb
4th QUARTER FY 86

PLATE 41


EAST 104TH AVENUE
PORT L. MIT
BEAR HEATON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST
C STREET
D STREET
96TH AVENUE
RESERVOIR F
15
14
22
23
27
26
37343
37342
37058
37308
37309
37310
37311
37312
37313
37314
37315
37316
37317
37318
37319
37320
37321
37322
37323
37324
37325
37326
37327
37328
37329
37330
37331
37332
37333
37334
37335
37336
37337
37338
37339
37340
37341
37342
37343
37344
37345
37346
37347



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

DESIGNED BY

DRAWN BY J.H. DILDINE

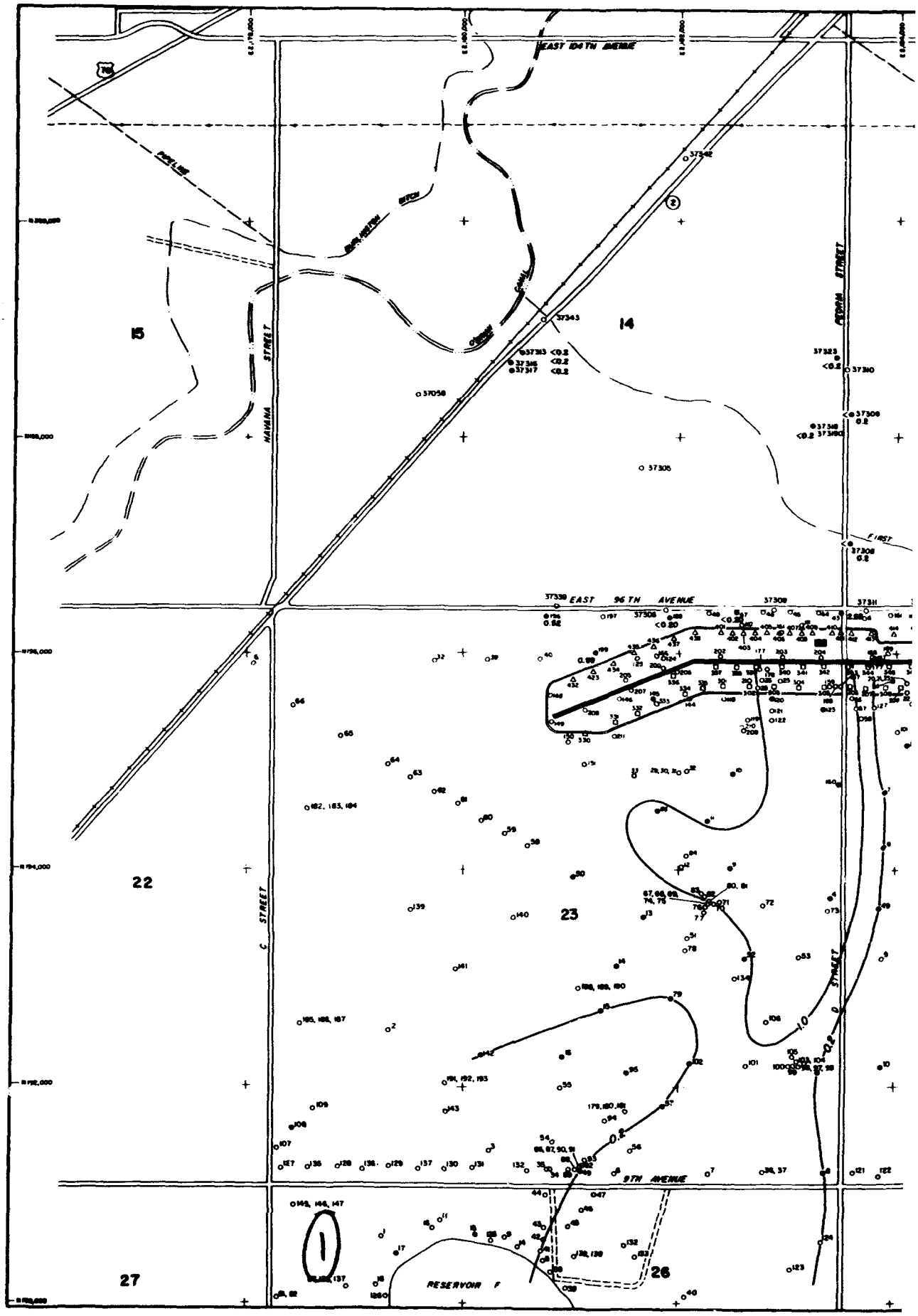
REVIEWED BY D.W. THOMPSON

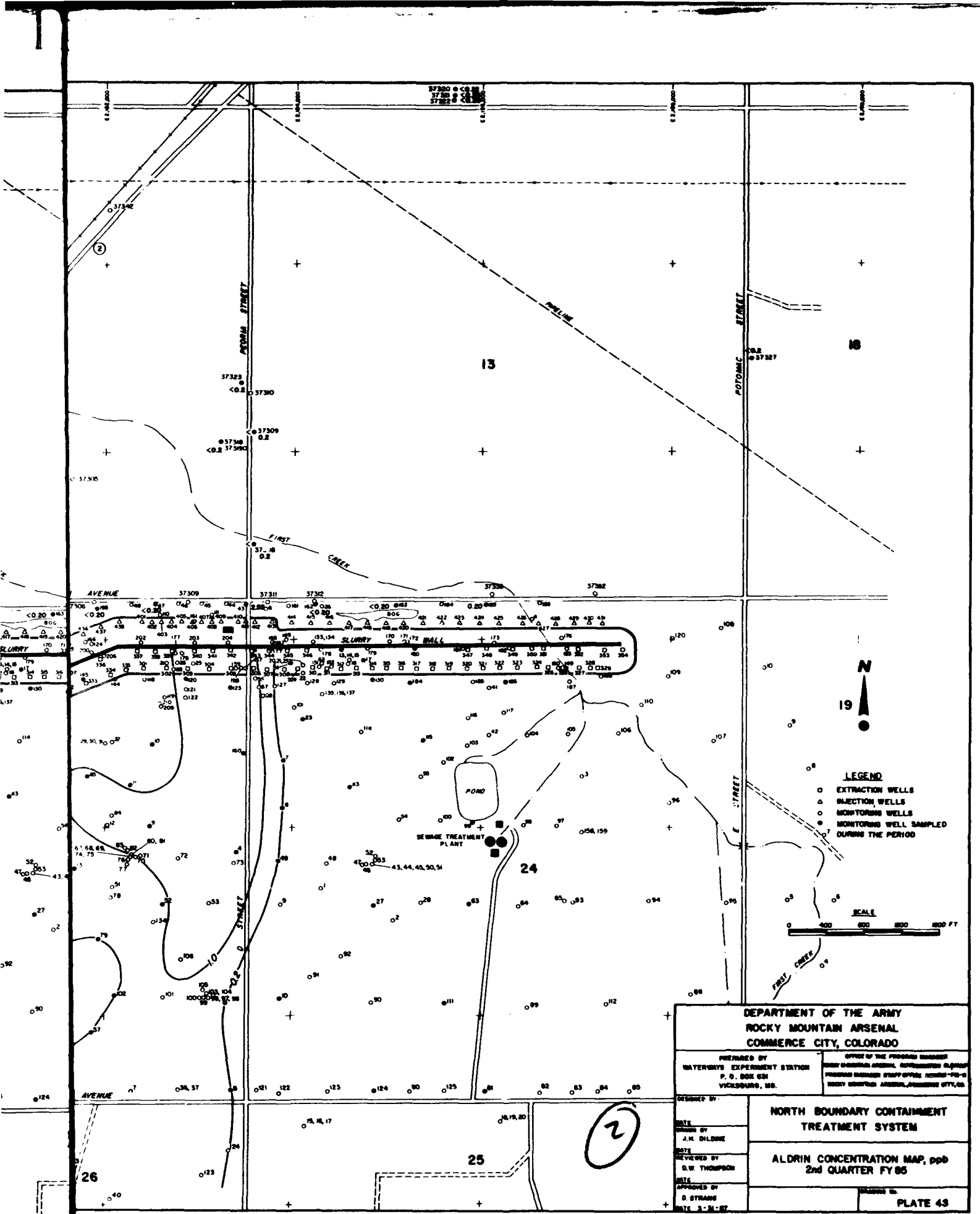
APPROVED BY D. STRAINS

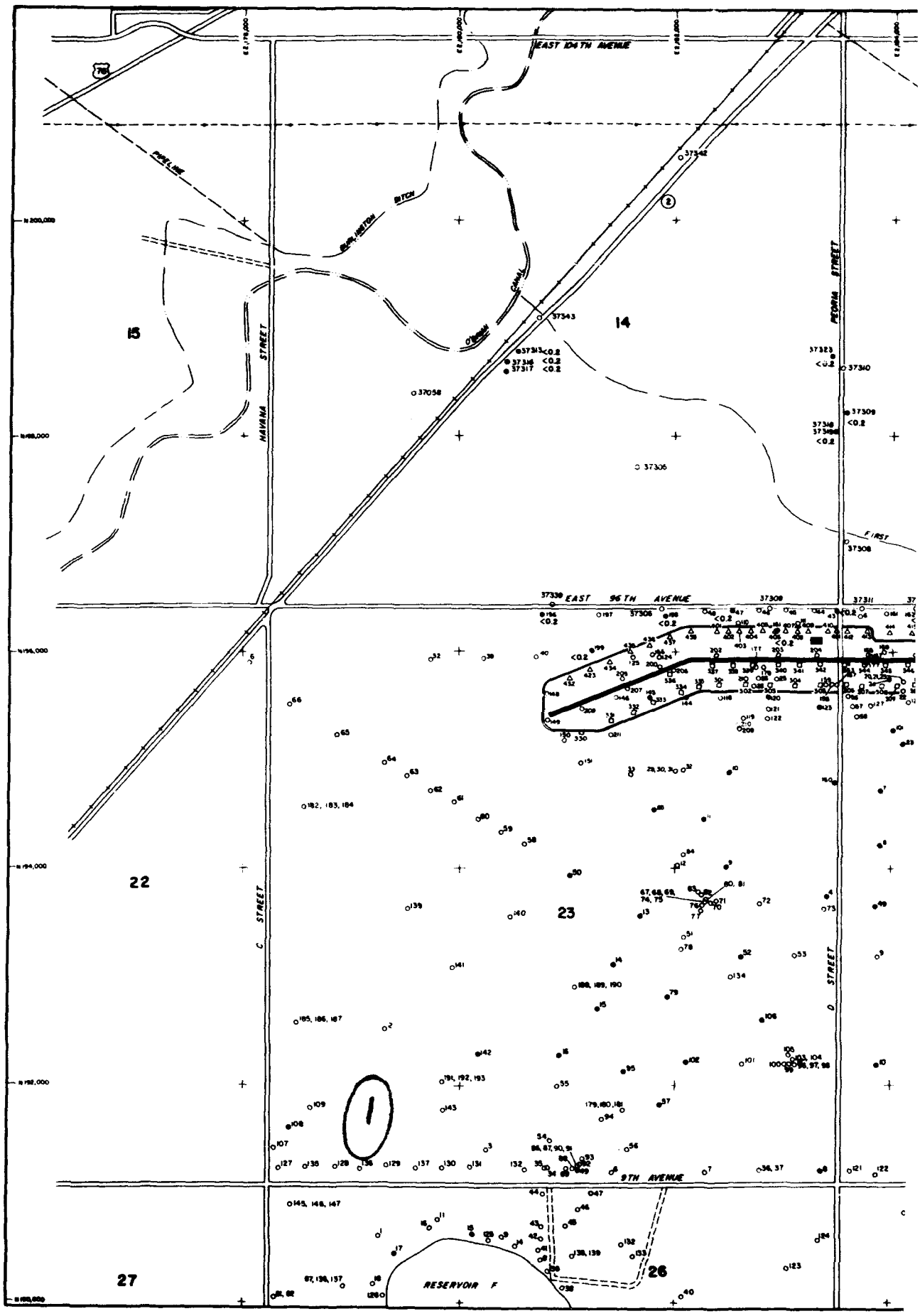
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

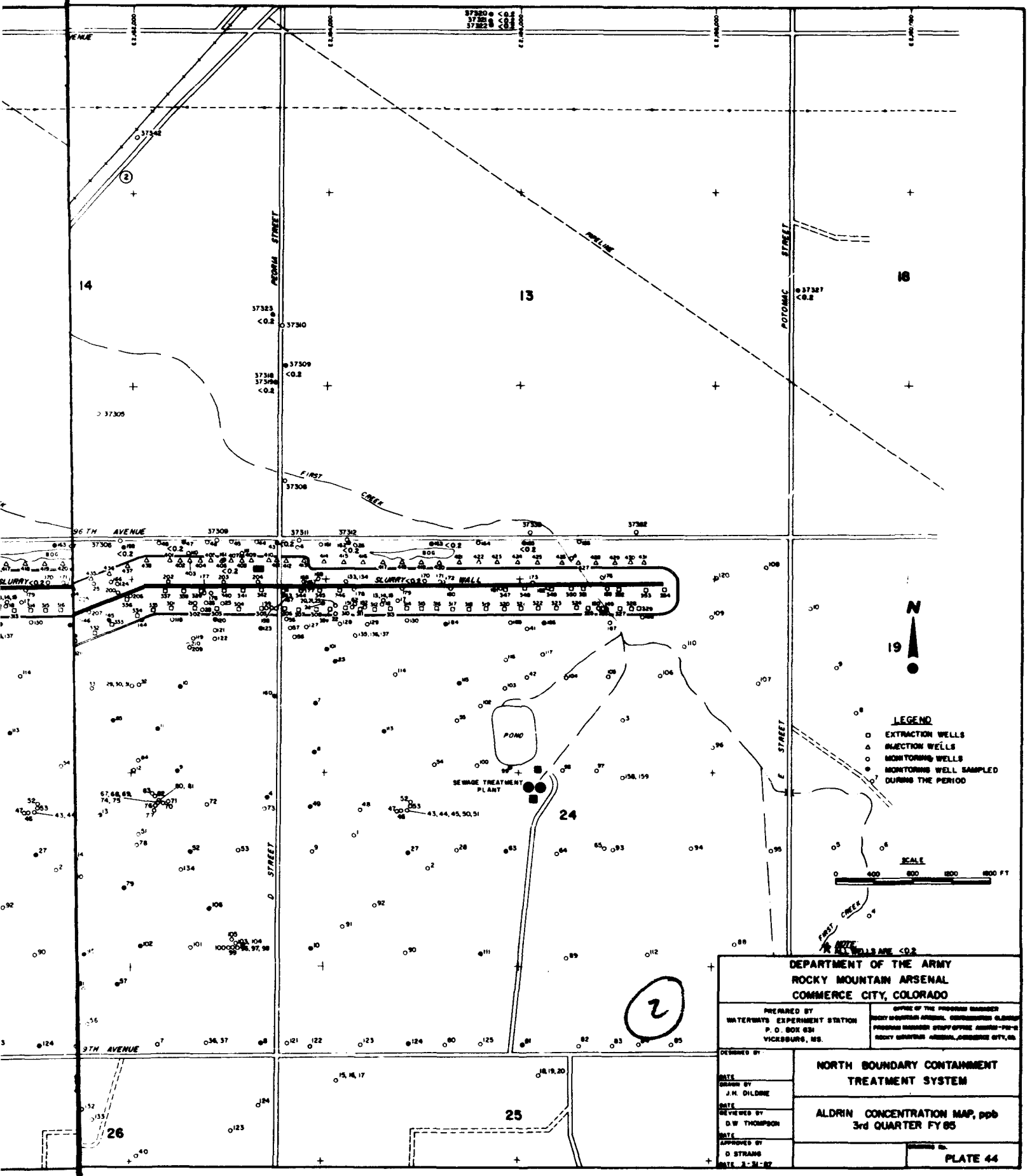
ALDRIN CONCENTRATION MAP, ppb
1st QUARTER FY 85

PLATE 42


EAST 104TH AVENUE
PIPE LINE
HAVANA STREET
ADAMS STREET
EAST 96TH AVENUE
C STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
27
26
1
37343
37342
37340
37305
37058
37339
37308
37311
37323
37306
37307
37309
37310
37312
37313
37314
37315
37316
37317
37318
37319
37320
37321
37322
37324
37325
37326
37327
37328
37329
37330
37331
37332
37333
37334
37335
37336
37337
37338
37339
37340
37341
37342
37343
37344
37345
37346
37347
37348
37349
37350
37351
37352
37353
37354
37355
37356
37357
37358
37359
37360
37361
37362
37363


PEORIA STREET
POTOMAC STREET
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
PIPELINE
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY
J.H. DILDINE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
D. STRANG
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
ALDRIN CONCENTRATION MAP, ppb
2nd QUARTER FY 85
PLATE 43


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
HAVANA STREET
PEORIA STREET
C STREET
O STREET
PIPE LINE
BARR DITCH
O'BRIEN CANAL
FIRST
RESERVOIR F
15
14
22
23
27
26
1
2
37342
37343
37058
37306
37308
37309
37310
37311
37323
37338
37339
37340
37341
37346
37347
37348
37349
37350
37351
37352
37353
37354
37355
37356
37357
37358
37359
37360
37361
37362
37363
37364
37365
37366
37367
37368
37369
37370
37371
37372
37373
37374
37375
37376
37377
37378
37379
37380
37381
37382
37383
37384
37385



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

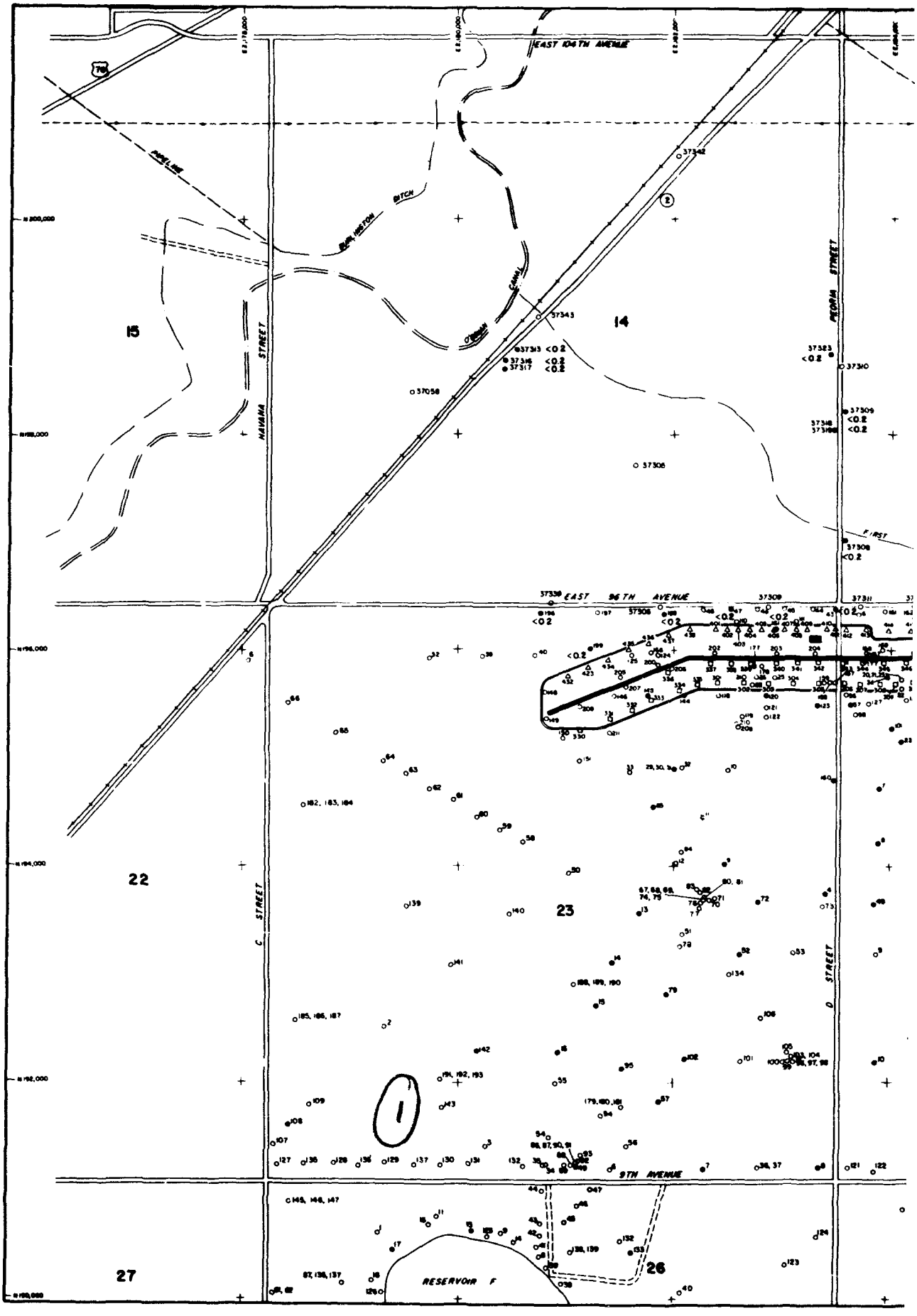
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATED CLEANUP
PROGRAM MANAGER STAFF OFFICE ARMRM-PM-C
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

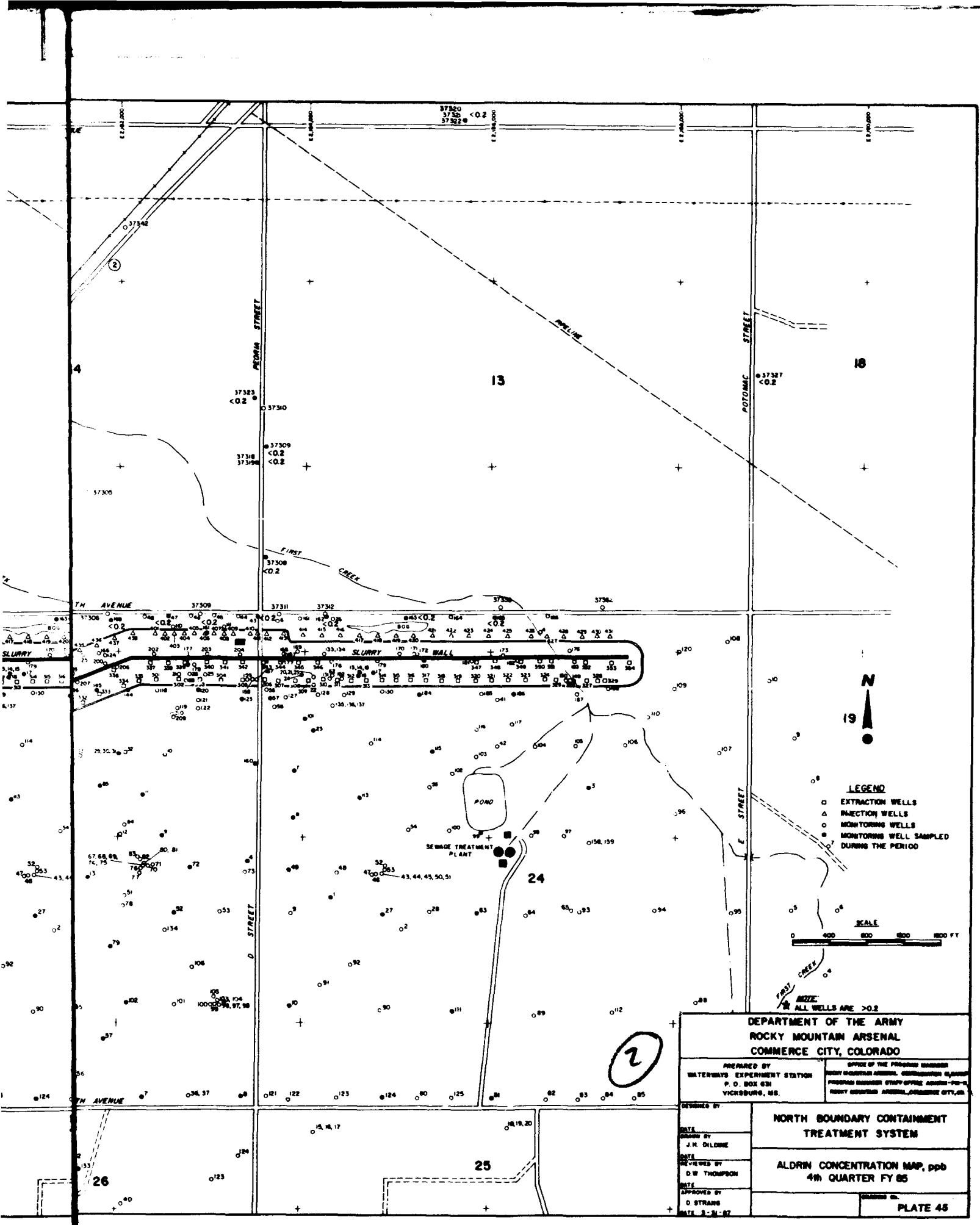
DESIGNED BY
DATE
DRAWN BY J.H. DILORIE
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY D. STRANG
DATE 3-31-87

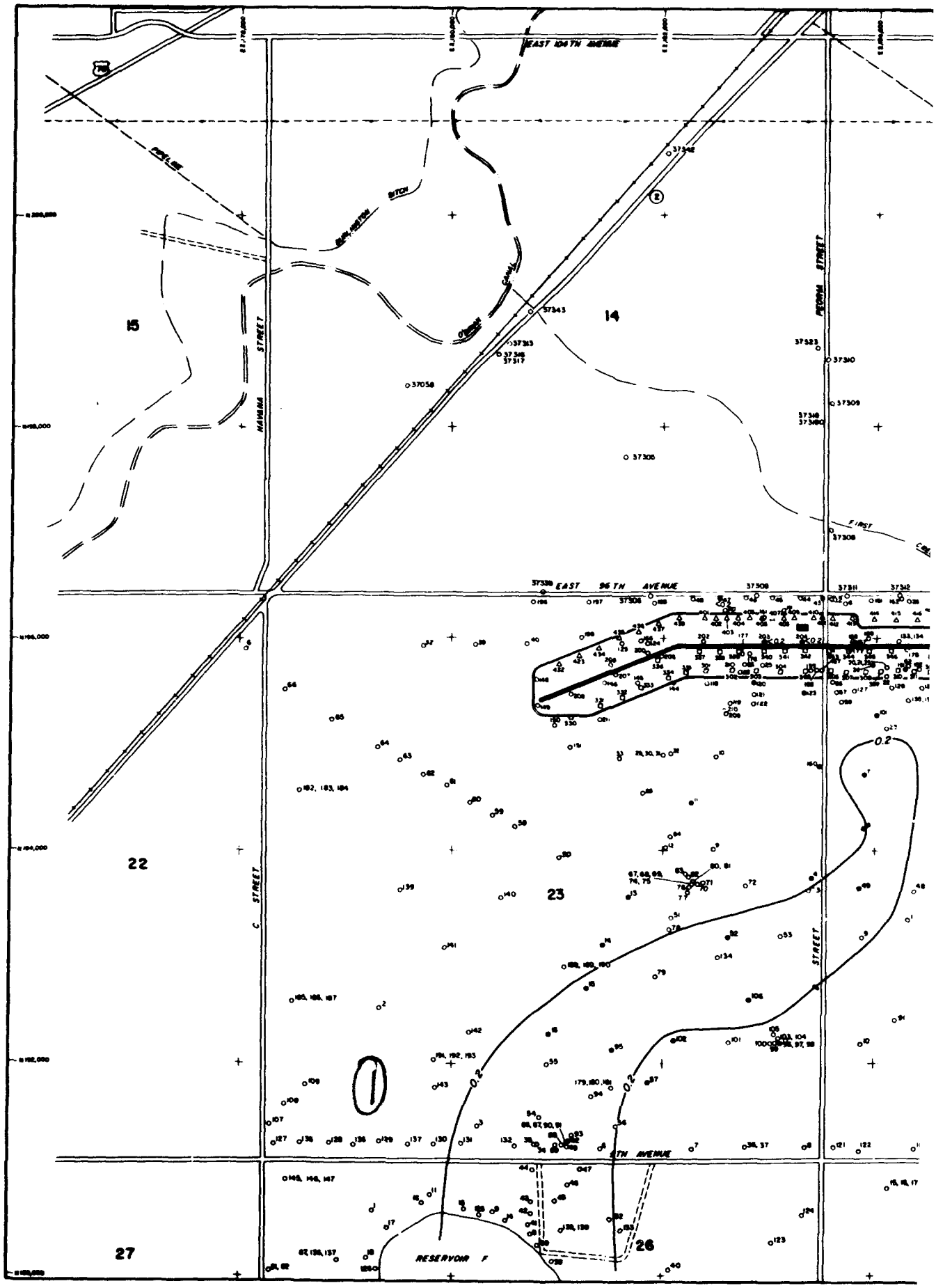
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

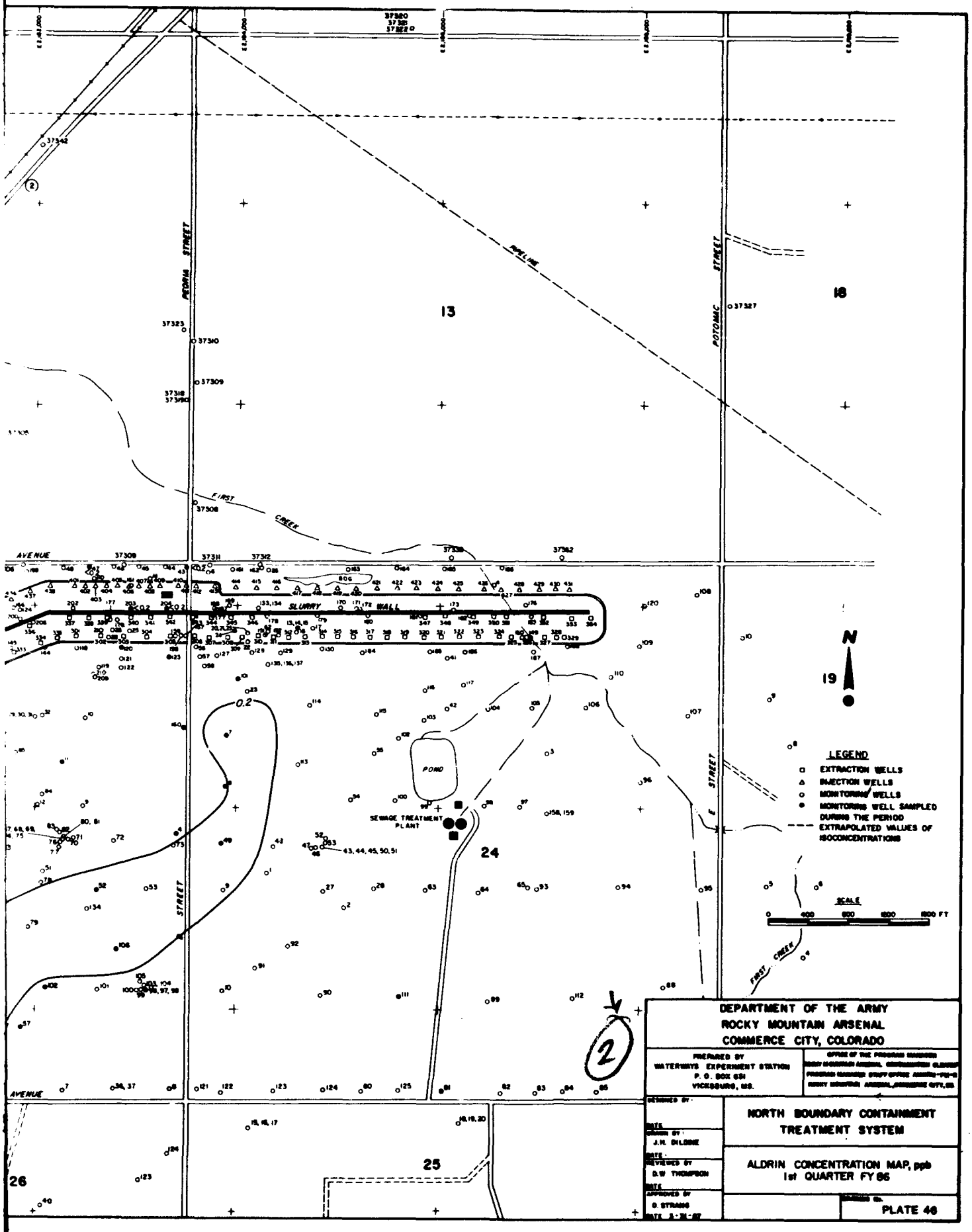
ALDRIN CONCENTRATION MAP, ppb
3rd QUARTER FY 85

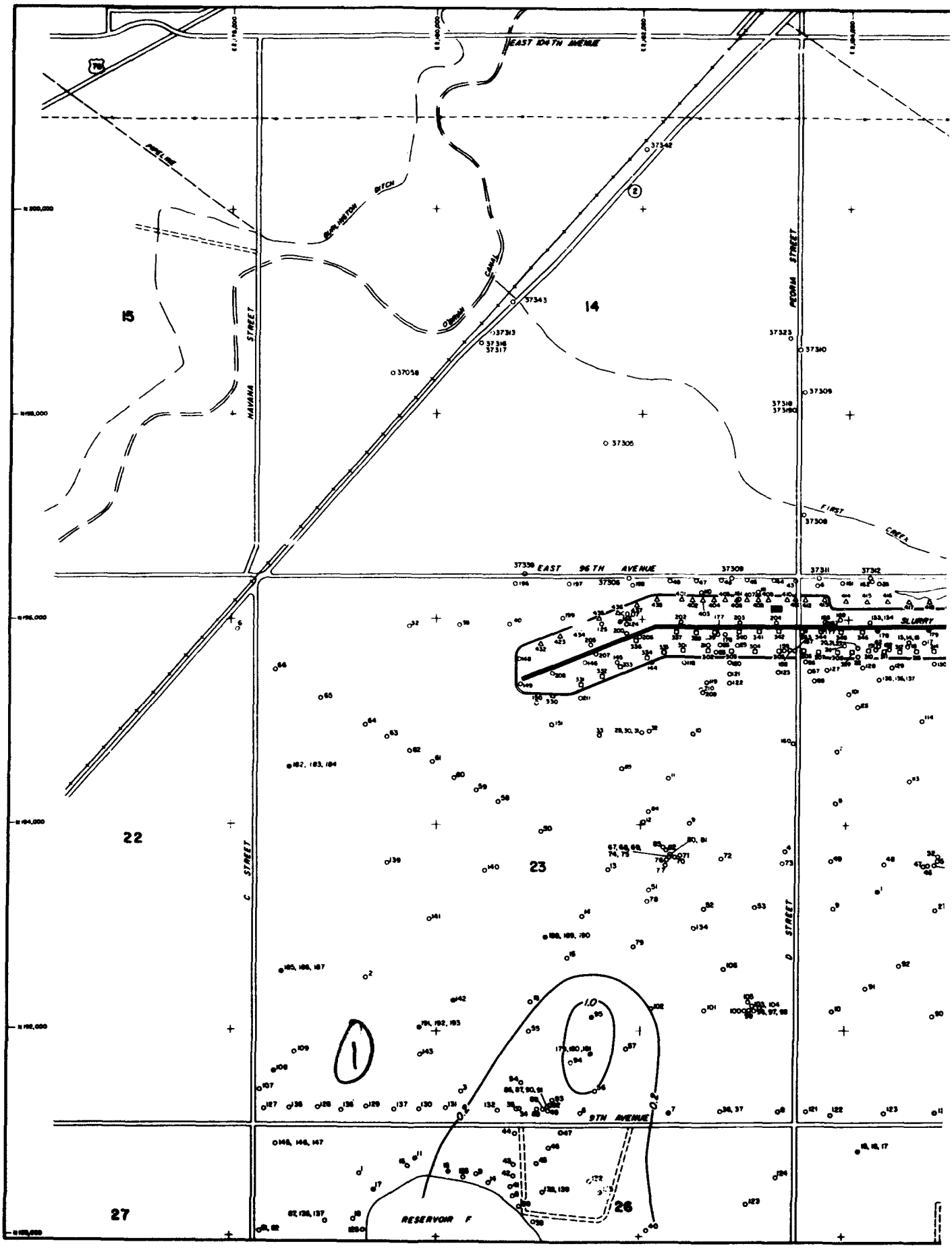
DRAWING No.
PLATE 44

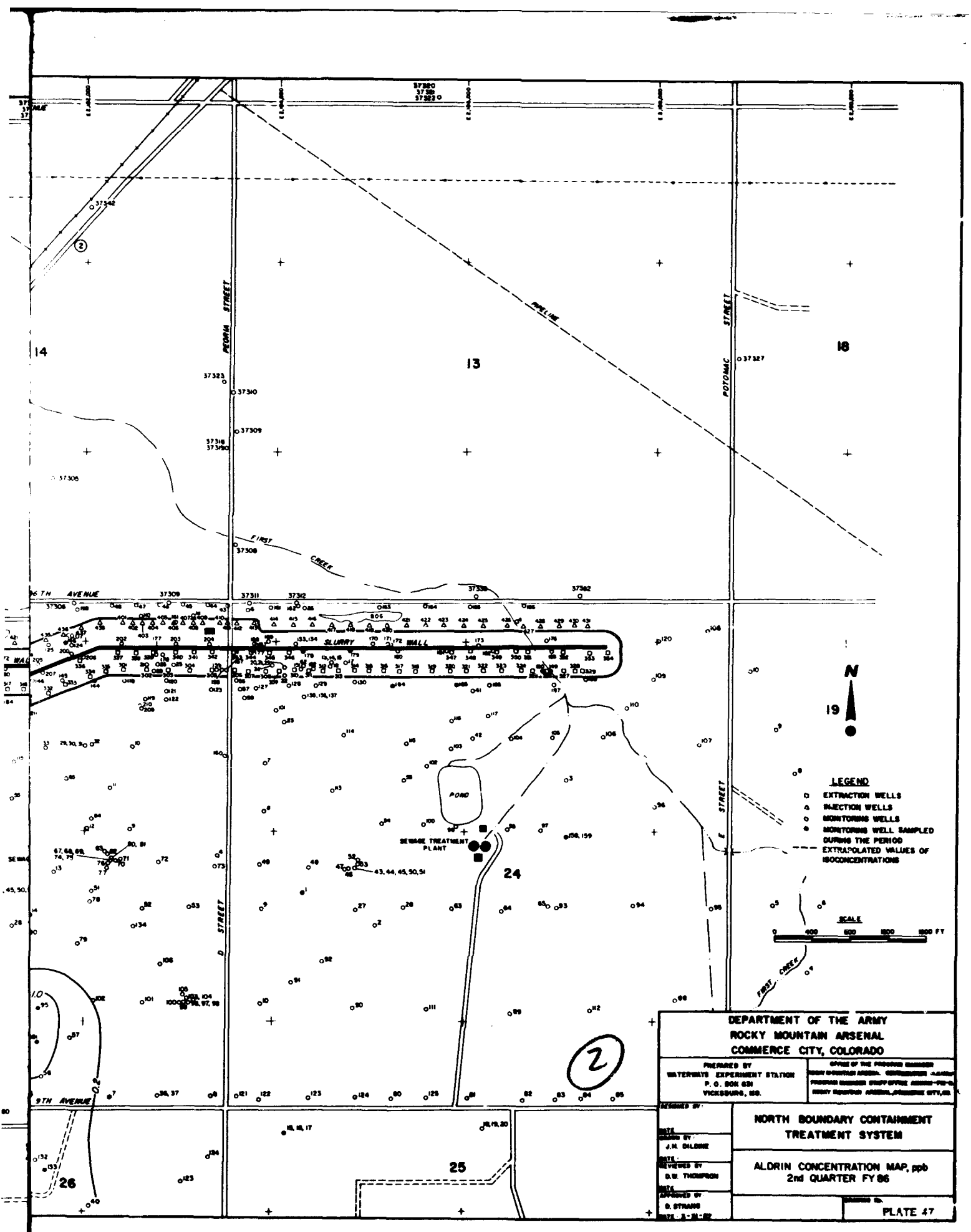

EAST 104TH AVENUE
76
PARK LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
15
14
37342
37343
37343 <0.2
37346 <0.2
37347 <0.2
37058
37583 <0.2
37340
37309
37348 <0.2
37308
37306
FIRST
37338 EAST 96TH AVENUE
37309
37311
<0.2
22
23
C STREET
D STREET
1
9TH AVENUE
27
RESERVOIR F
26

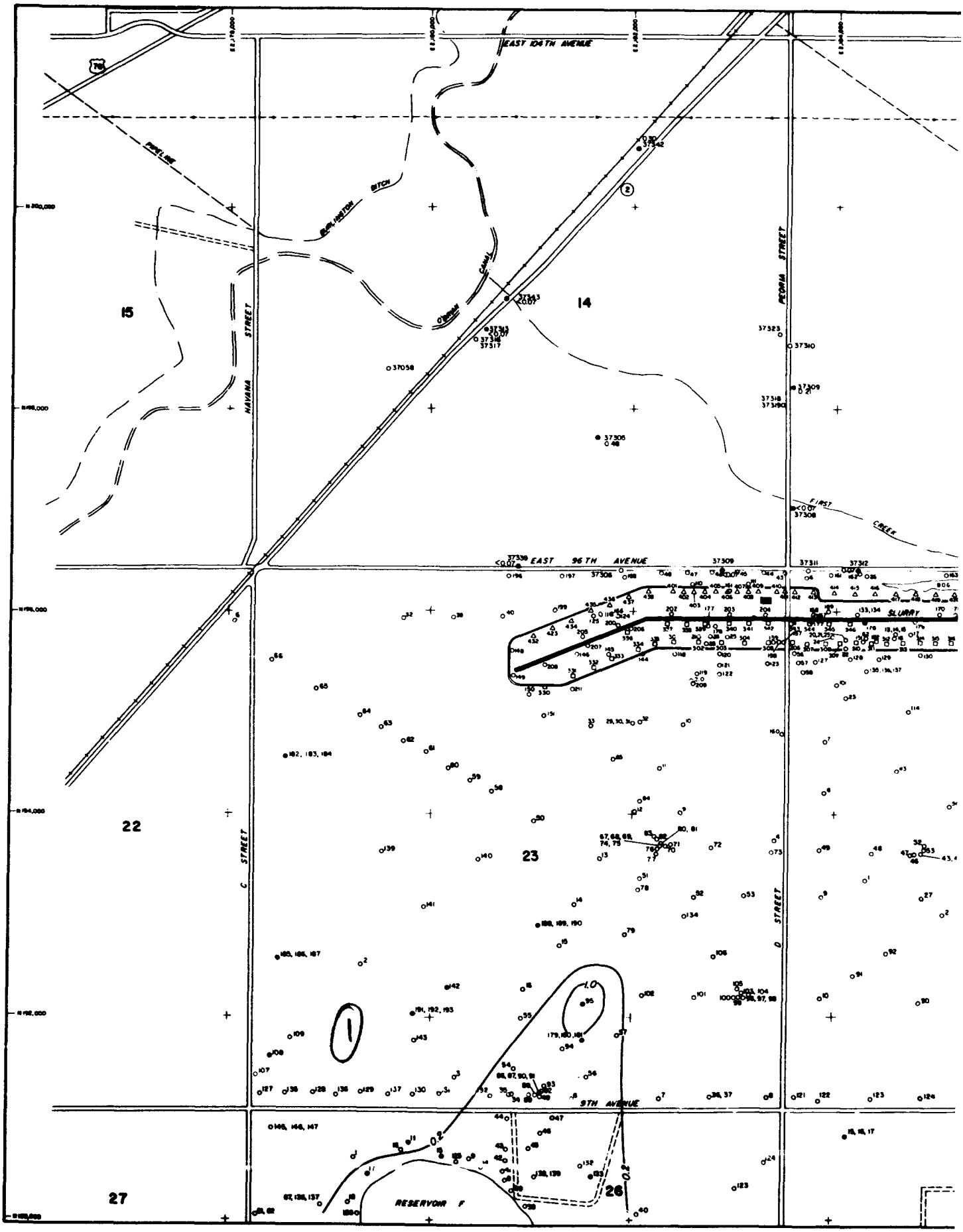

PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
D STREET
E STREET
13
18
19
24
25
26
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1600 FT
NOTE:
ALL WELLS ARE >0.2
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY
J.H. DILDINE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
O. STRAHS
DATE 3-31-87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
ALDRIN CONCENTRATION MAP, ppb
4th QUARTER FY 85
PLATE 45

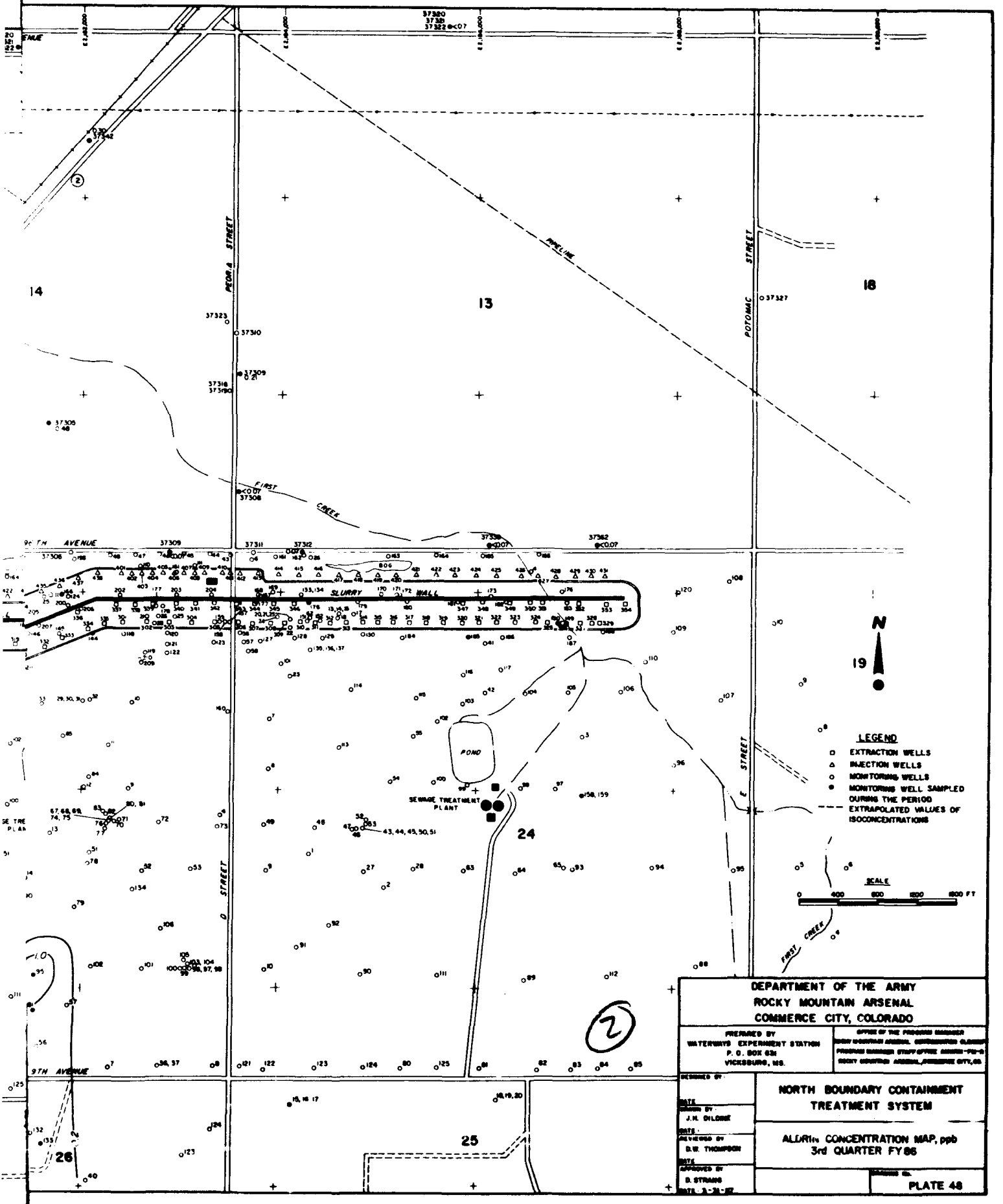

EAST 104TH AVENUE
EAST 96TH AVENUE
96TH AVENUE
HAMMA STREET
C STREET
PEORIA STREET
FIRST
15
14
22
23
27
26
RESERVOIR F
0.2
0.2
0.2
1


PEORIA STREET
POTOMAC STREET
E STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
AVENUE
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DATE
DRAWN BY
J.H. DILDINE
DATE
REVIEWED BY
D.W. THOMPSON
DATE
APPROVED BY
D. STRAWS
DATE 5-24-87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
ALDRIN CONCENTRATION MAP, ppb
1st QUARTER FY 86
PLATE 46


EAST 104TH AVENUE
PIPE LINE
BARR-HETTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
SLURRY
C STREET
D STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
1.0
0.2
37342
37343
37316
37317
37058
37323
37340
37309
37318
37319
37305
37308
37339
37306
37311
37312


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
96 TH AVENUE
9TH AVENUE
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
D STREET
E STREET
14
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MISS.
DESIGNED BY:
DRAWN BY
J.M. DILDINE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
D. STRAUB
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
ALDRIN CONCENTRATION MAP, ppb
2nd QUARTER FY 86
PLATE 47


EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
HAVANA STREET
PEORIA STREET
FIRST CREEK
EAST 96TH AVENUE
SLURRY
C STREET
O STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
27
26
1
2



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

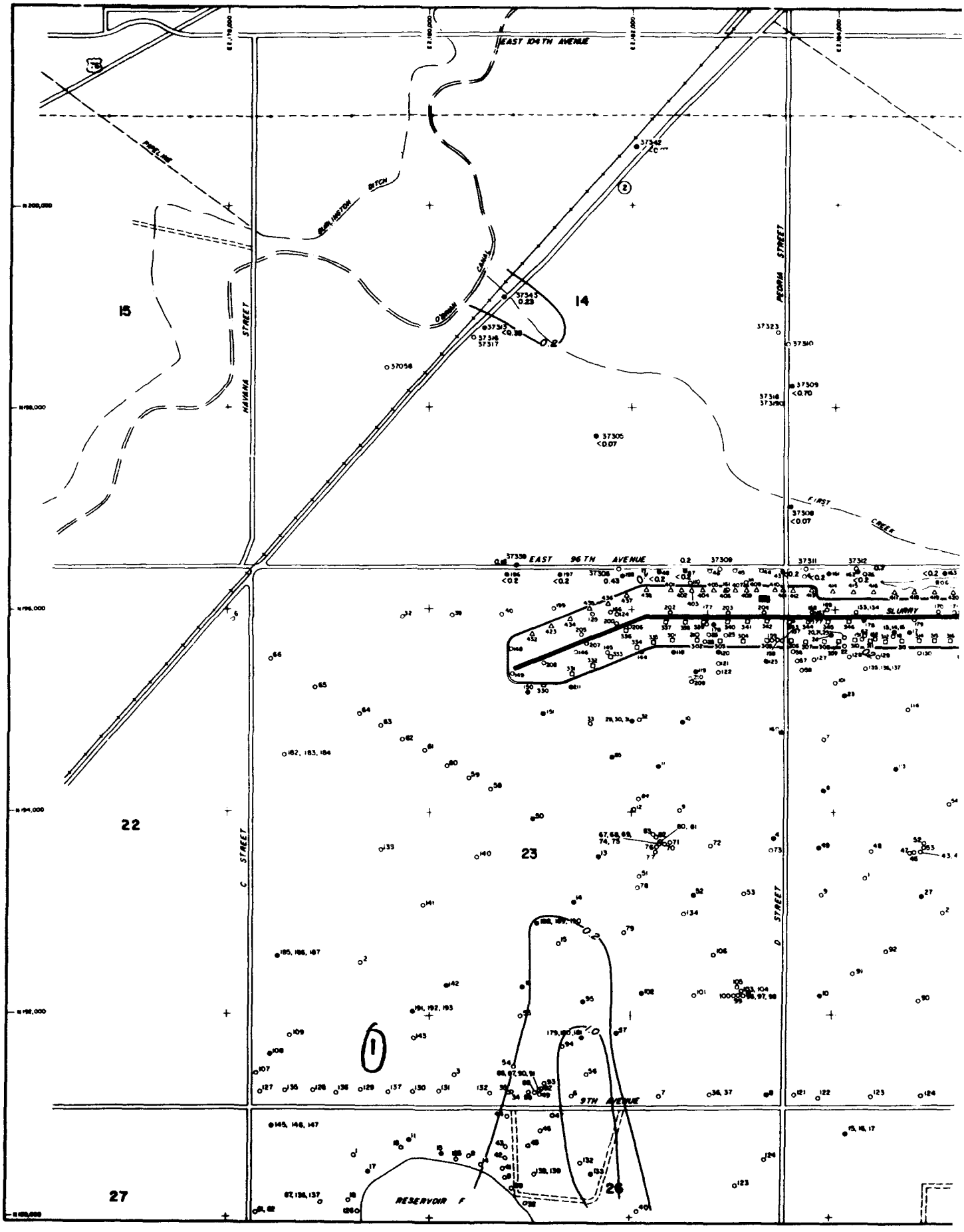
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE (AMXRM-PM-C)
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

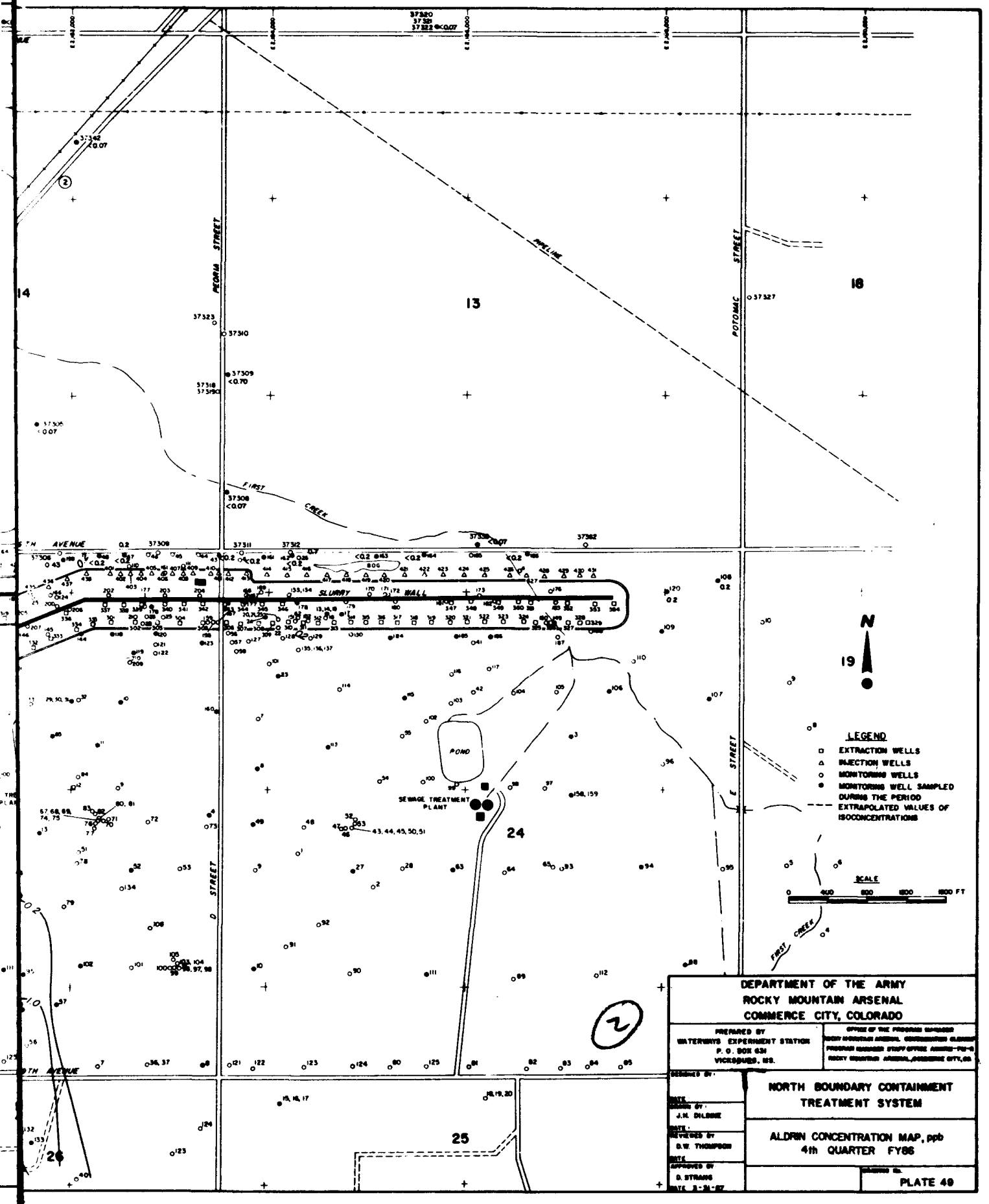
DESIGNED BY
DATE
DRAWN BY
J.H. DILORIE
DATE
REVIEWED BY
D.W. THOMPSON
DATE
APPROVED BY
D. STRAHS
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

ALDRIN CONCENTRATION MAP, ppb
3rd QUARTER FY86

PLATE 48


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
O STREET
SLURRY
RESERVOIR F
FIRST CREEK
O'BRIAN CANAL
15
14
22
23
27
28
37345
37346
37317
37058
37323
37340
37309
37318
37319
37305
37308
37339
37306
37307
37311
37342
37343



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

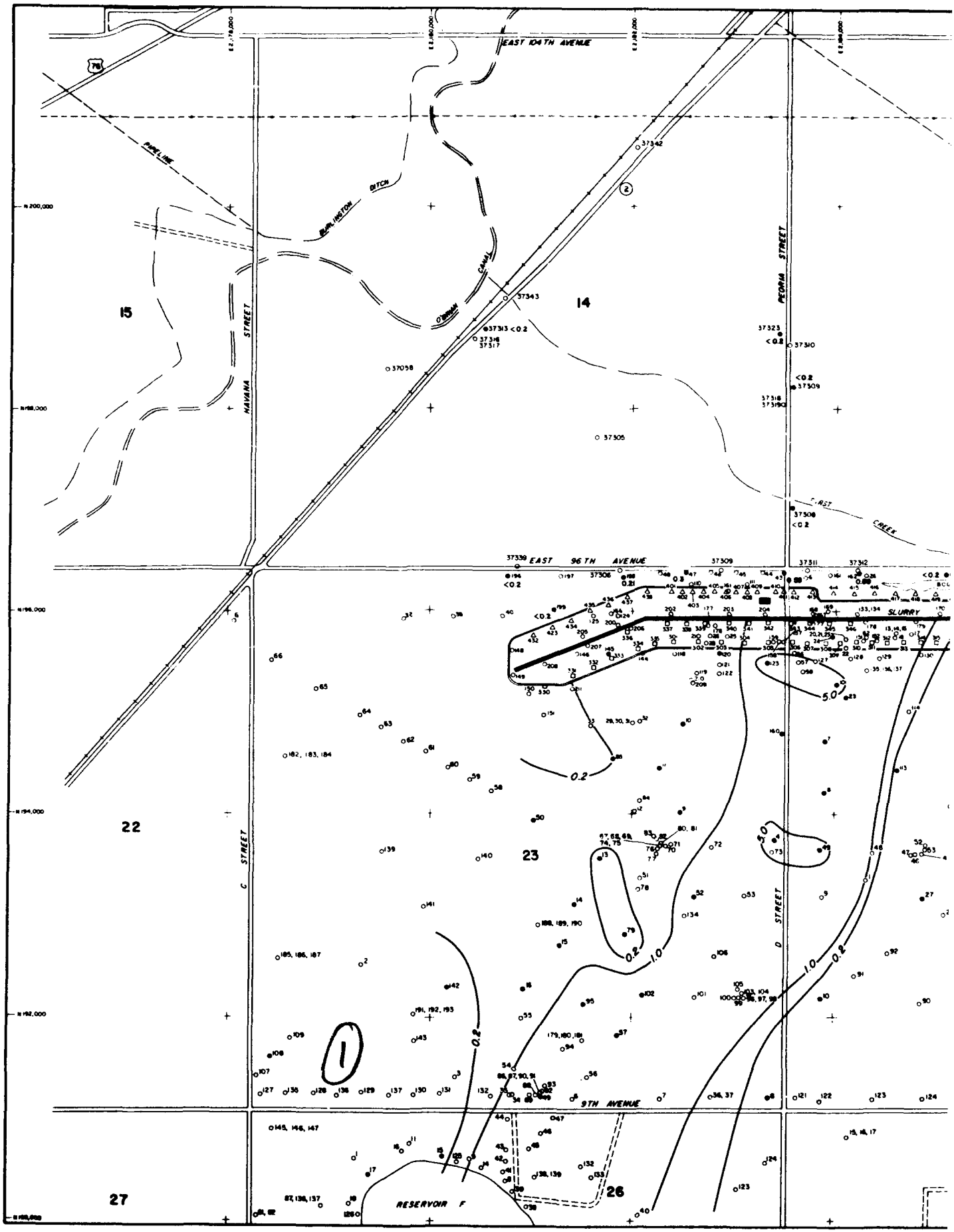
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATED CLEANUP
PROGRAM MANAGER STAFF OFFICE ARMCO-FMC-H
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

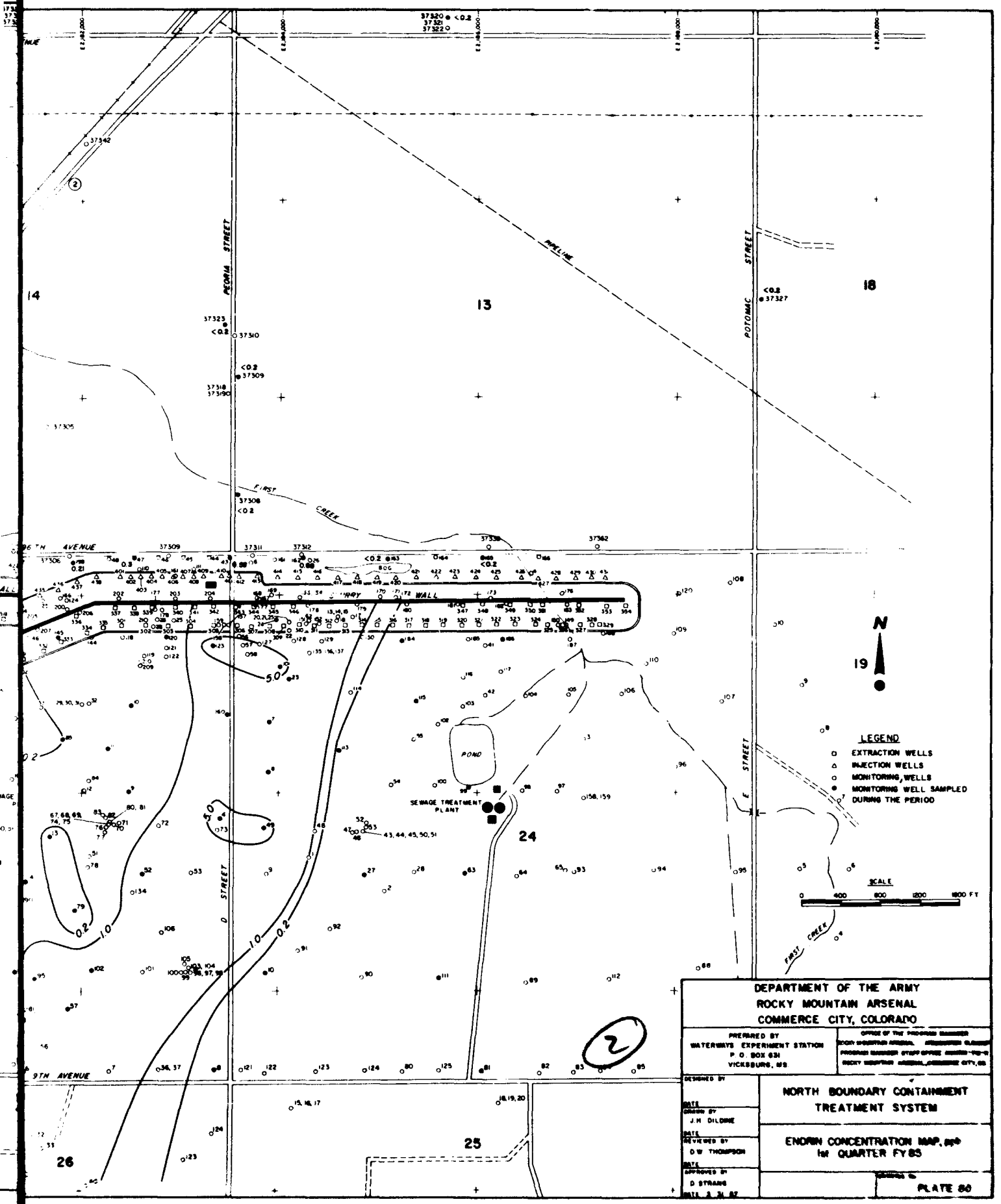
DESIGNED BY:
DATE:
DRAWN BY: J.M. DILSAVE
DATE:
REVIEWED BY: D.W. THOMPSON
DATE:
APPROVED BY: D. STRAUB
DATE: 3-24-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

ALDRIN CONCENTRATION MAP, ppb
4th QUARTER FY86

DRAWING No.
PLATE 49


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
O STREET
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
EAST CREEK
SLURRY
RESERVOIR F
15
14
22
23
27
26
37342
37343
37313 <0.2
37316
37317
37058
37305
37323
<0.2
37340
<0.2
37309
37318
37319
37306
<0.2
37339
37308
37311
37312
<0.2
5.0
0.2
1.0
0.2
1.0
0.2
1
N 200,000
N 198,000
N 196,000
N 194,000
N 192,000



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

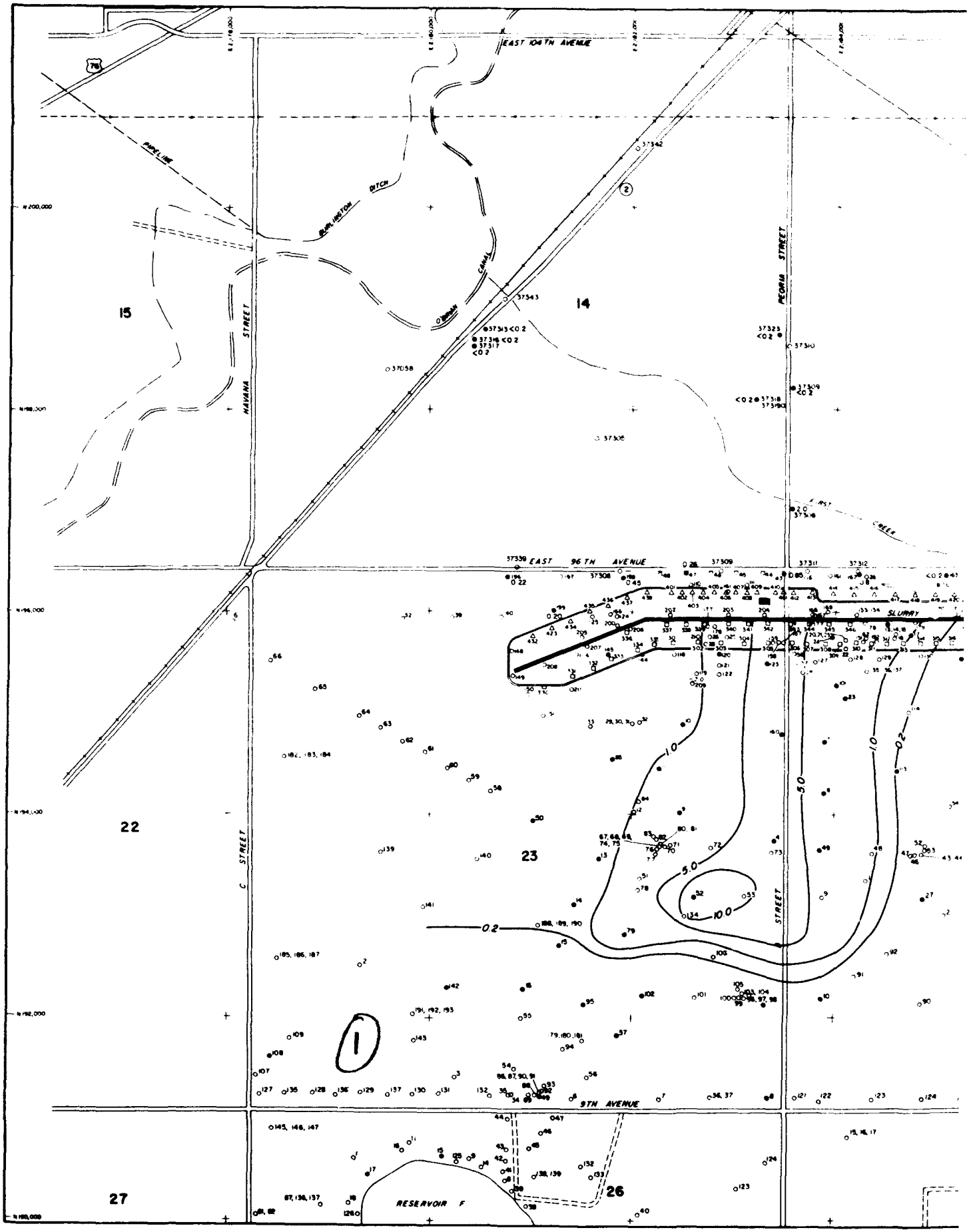
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS

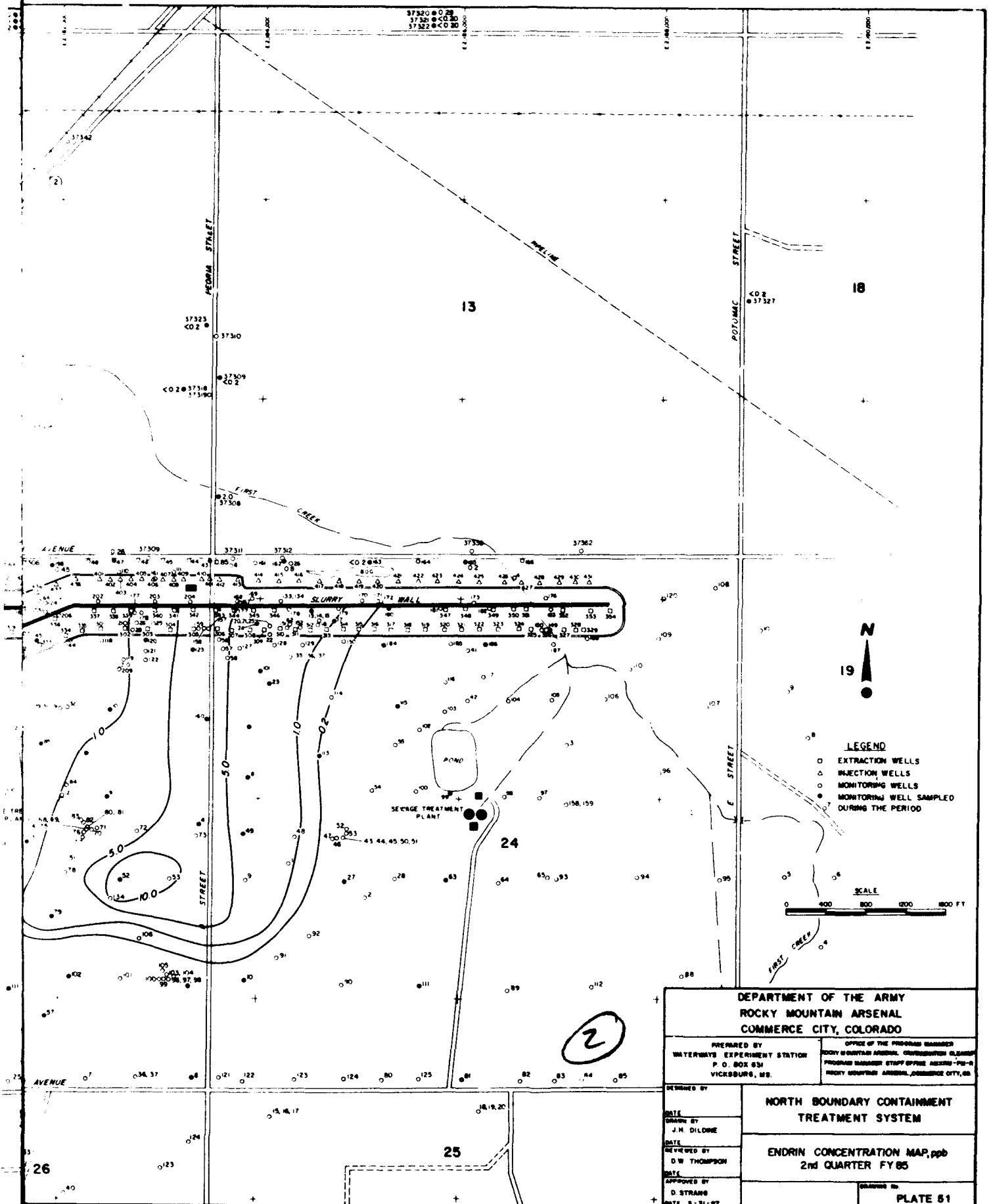
DESIGNED BY
DRAWN BY J.H. DILORNE
REVIEWED BY D.W. THOMPSON
APPROVED BY D. STRAUB

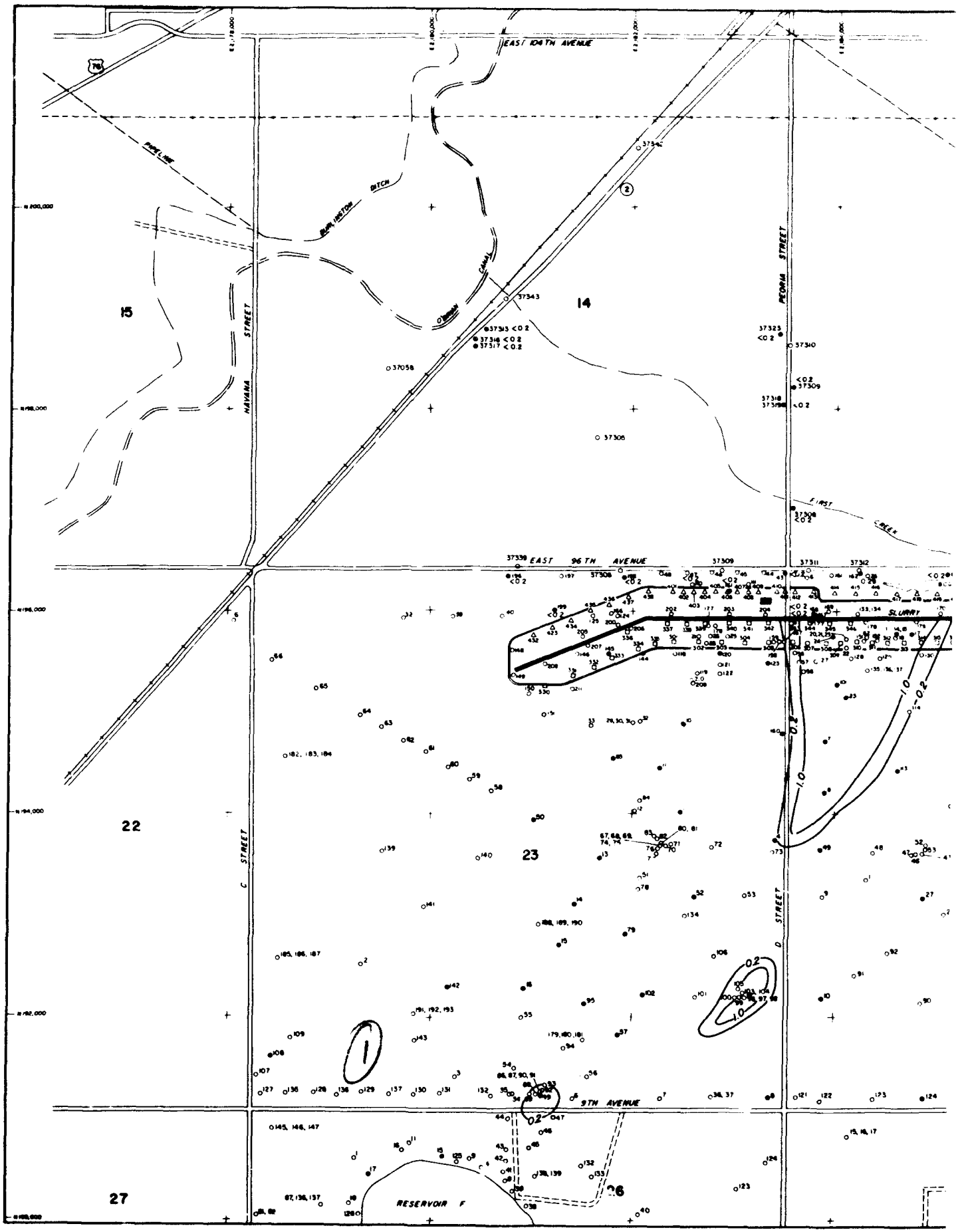
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

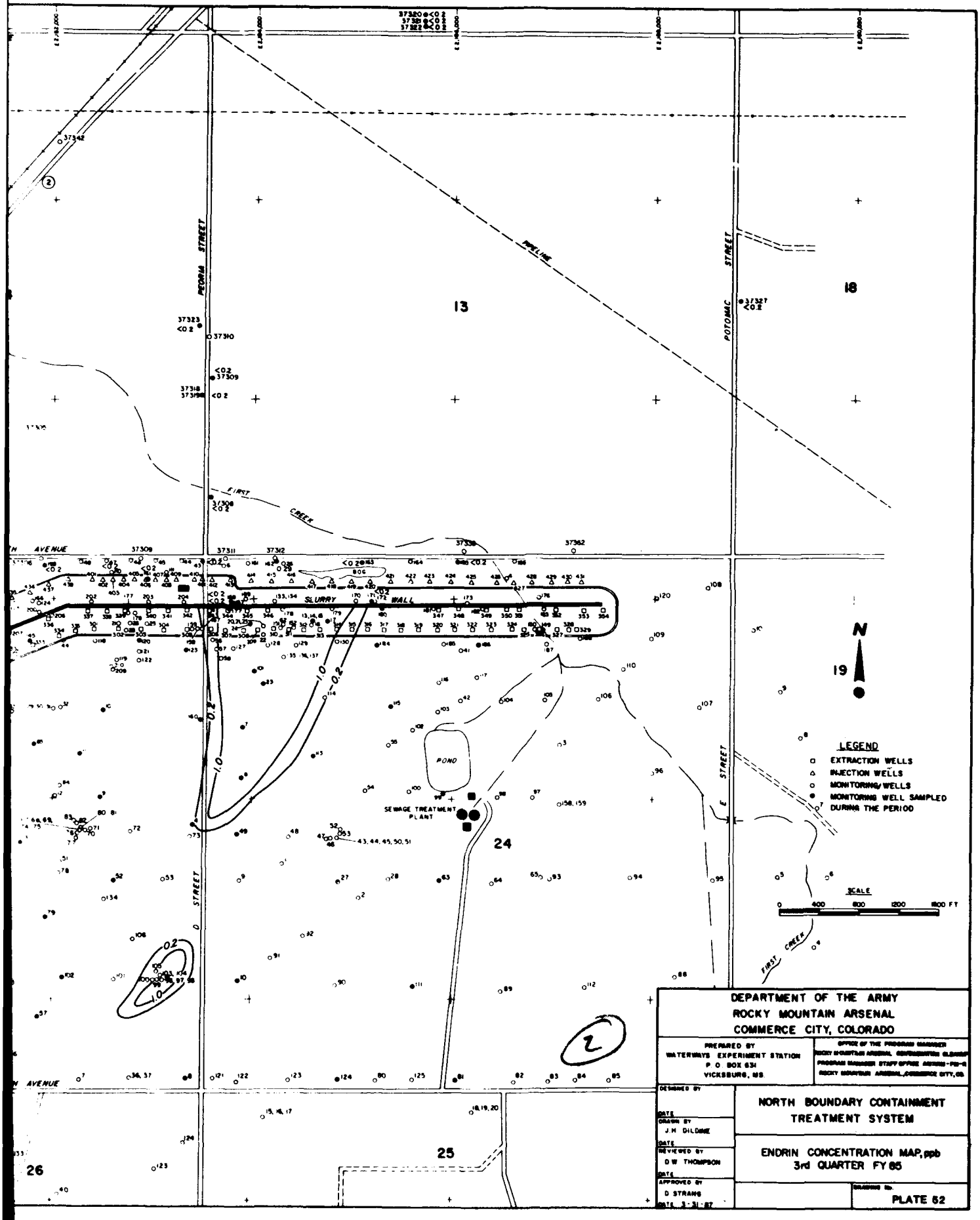
ENDRIN CONCENTRATION MAP, ppb
1st QUARTER FY 85

PLATE 80


EAST 104TH AVENUE
PIPELINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
C STREET
EAST 96TH AVENUE
SLURRY
SLURRY
CREEK
STREET
STH AVENUE
RESERVOIR F
15
14
22
23
27
26
1.0
5.0
10.0
0.2


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
E STREET
AVENUE
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1200 1600 FT
1.0
5.0
10.0
0.2
2
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ARSENAL-PM-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
DESIGNED BY
DATE
DRAWN BY
J.H. DILORNE
DATE
REVIEWED BY
D.W. THOMPSON
DATE
APPROVED BY
D. STRAND
DATE 3-31-87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
ENDRIN CONCENTRATION MAP, ppb
2nd QUARTER FY 85
DRAWING No.
PLATE 51


EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
SLURRY
C STREET
D STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
27
26
37343
37343 <0.2
37346 <0.2
37317 <0.2
37058
37306
37325 <0.2
37340
37309 <0.2
37308 <0.2
37339
37308
37309
37311
37312
1.0
0.2
0.2
1.0
0.2
1.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P O BOX 631
VICKSBURG, MS.

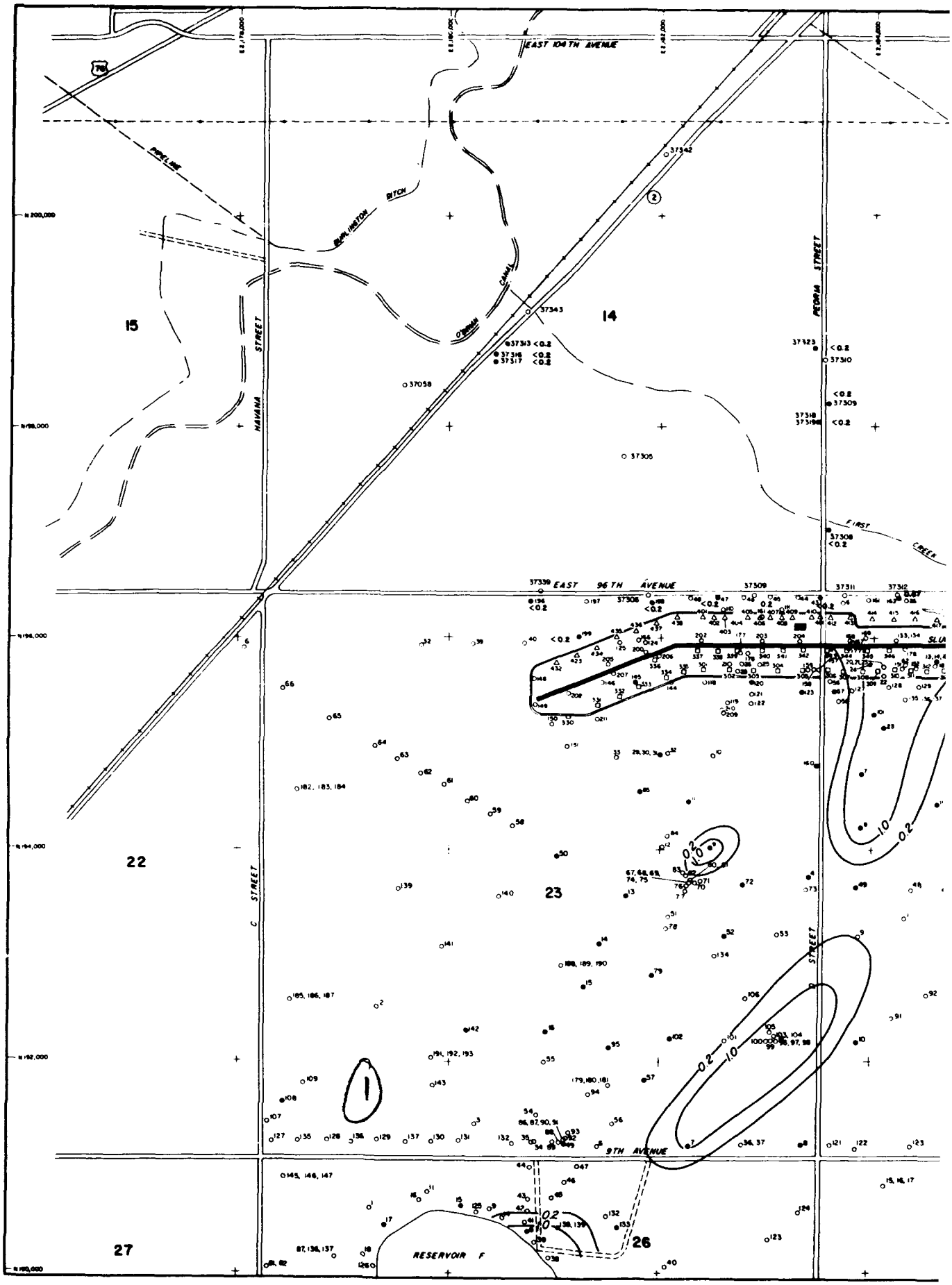
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATED CLEANUP
PROGRAM MANAGER STAFF OFFICE ATTN: PM-RMA
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

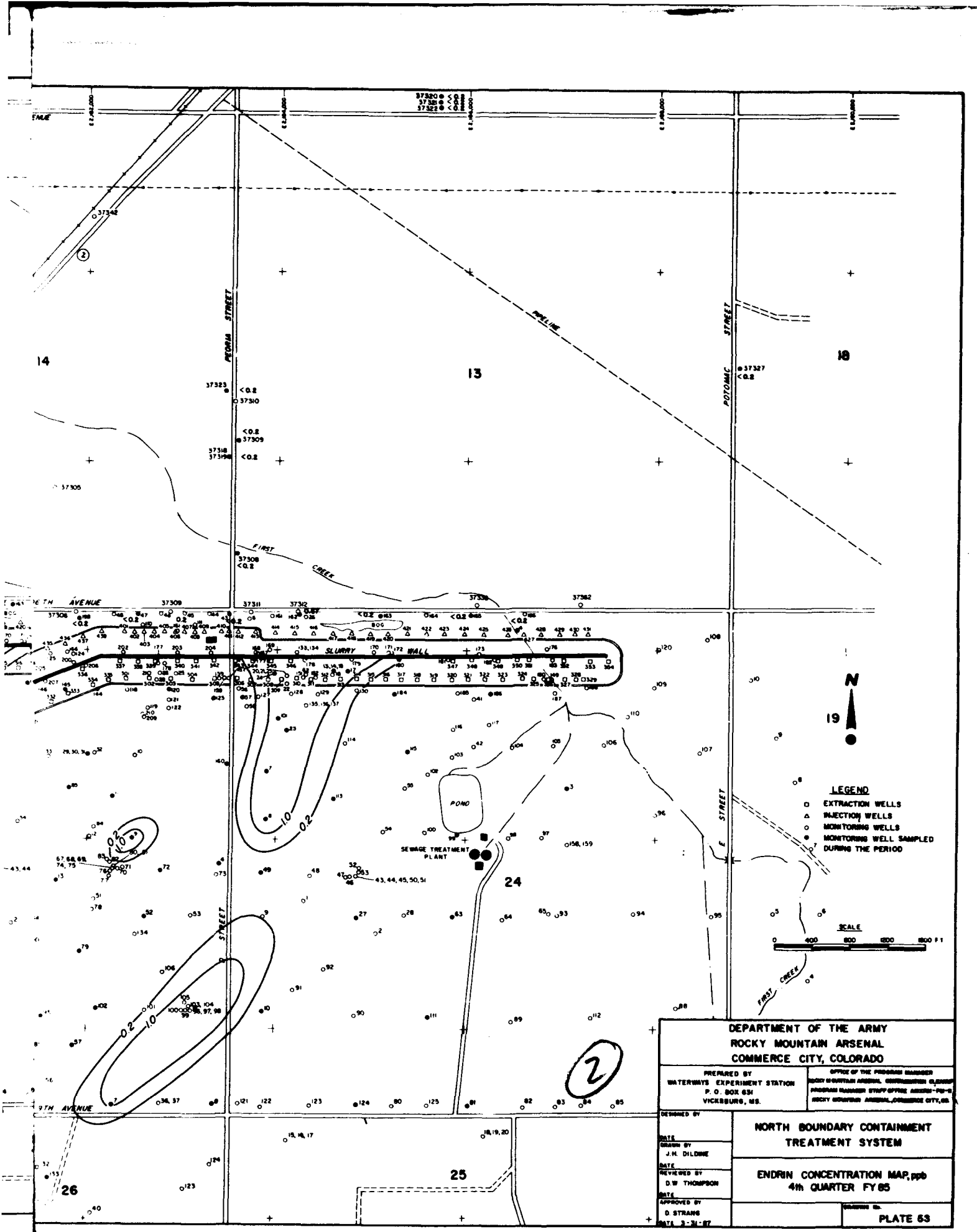
DESIGNED BY
DATE
DRAWN BY J.M. DILDINE
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY D. STRANG
DATE 5-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

ENDRIN CONCENTRATION MAP, ppb
3rd QUARTER FY 85

DRAWING No.
PLATE 62


EAST 104TH AVENUE
PIPELINE
BARLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
C STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
27
26
37342
37343
37058
37305
37339
37306
37309
37311
37312
37323
37310
37308
37318
37319
37316
37317
<0.2
0.2
1.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

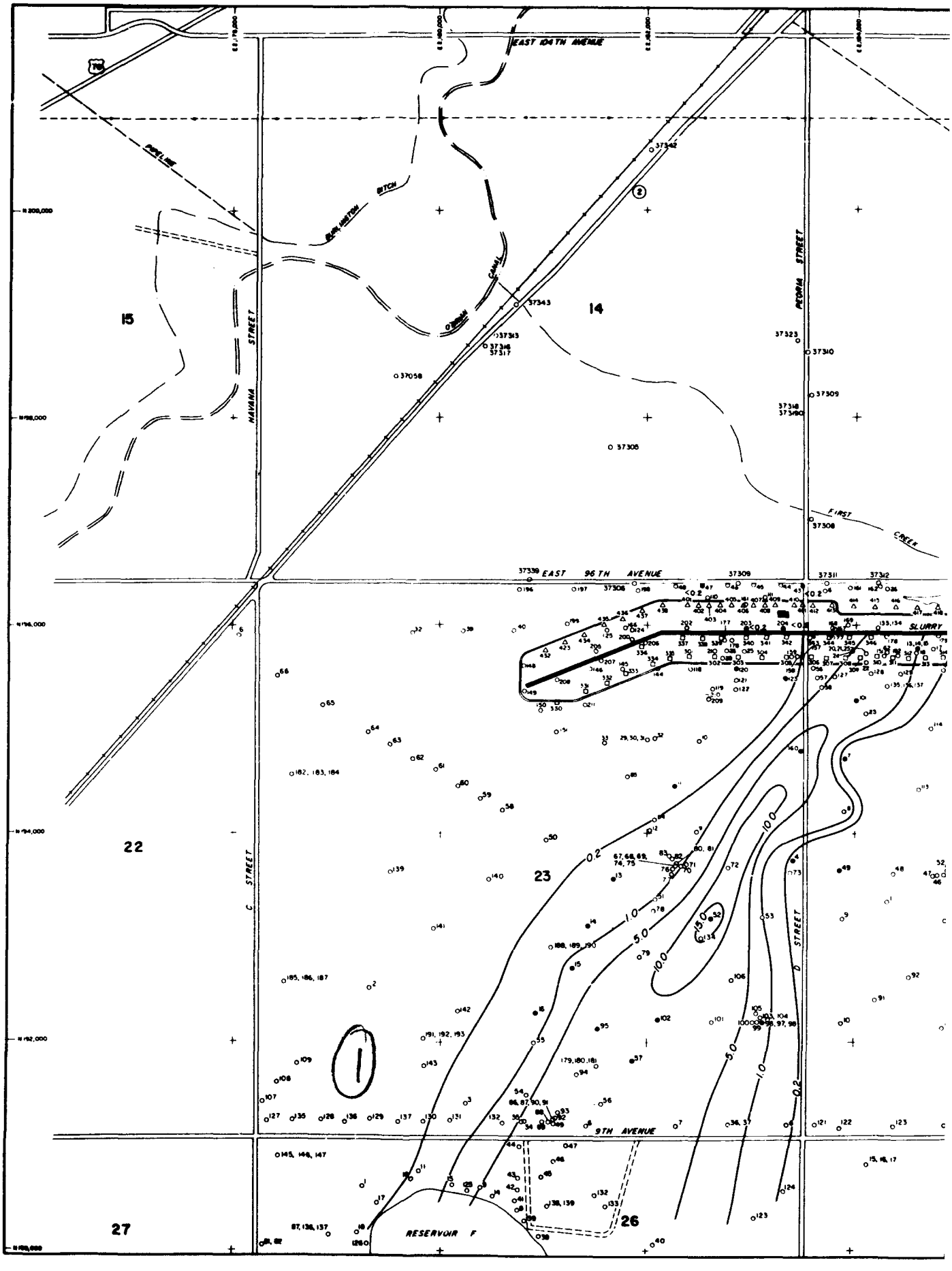
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE (AMXEN-PD-C)
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

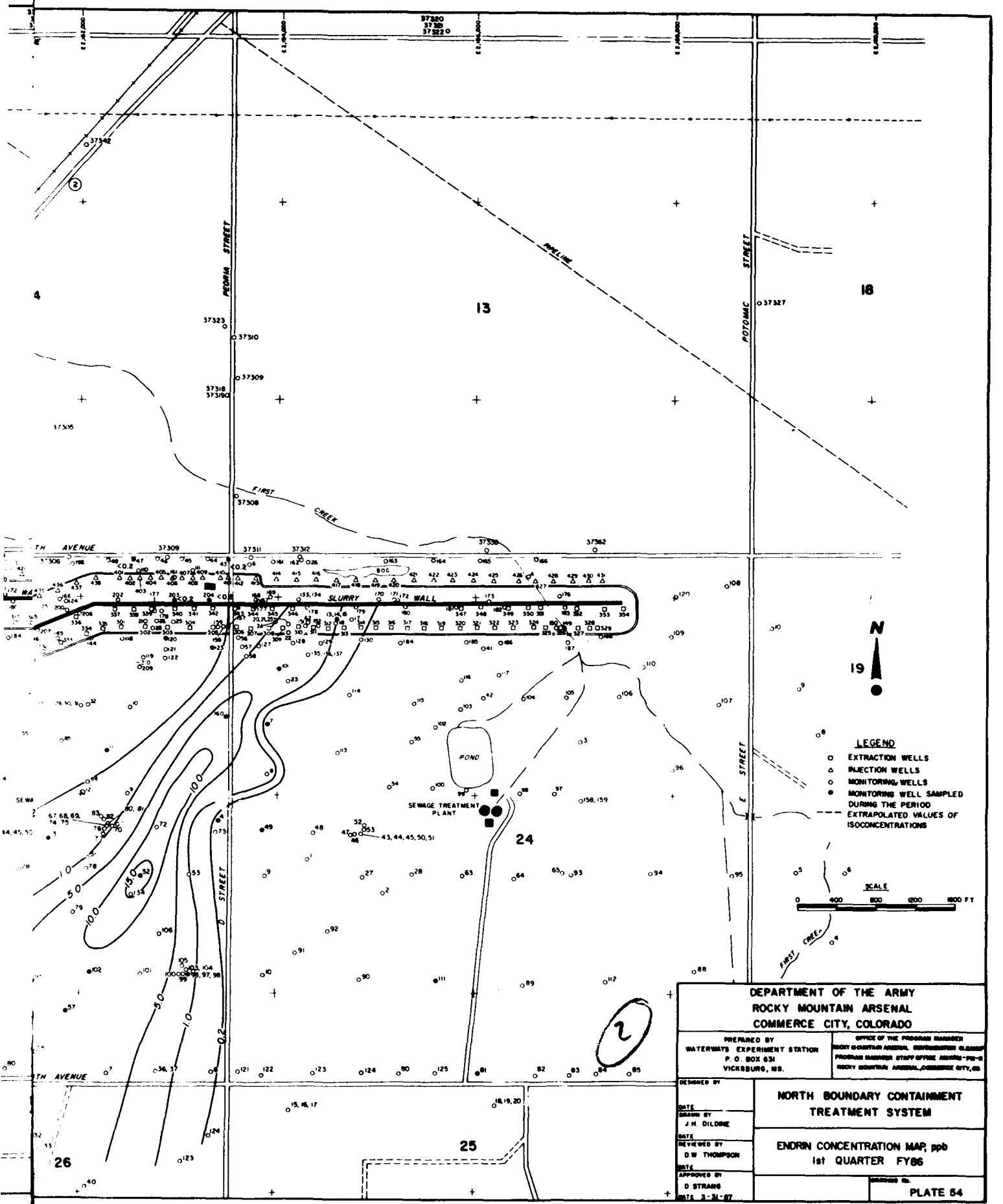
DESIGNED BY
DATE
DRAWN BY J.H. DILDINE
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY D. STRANG
DATE 3-31-87

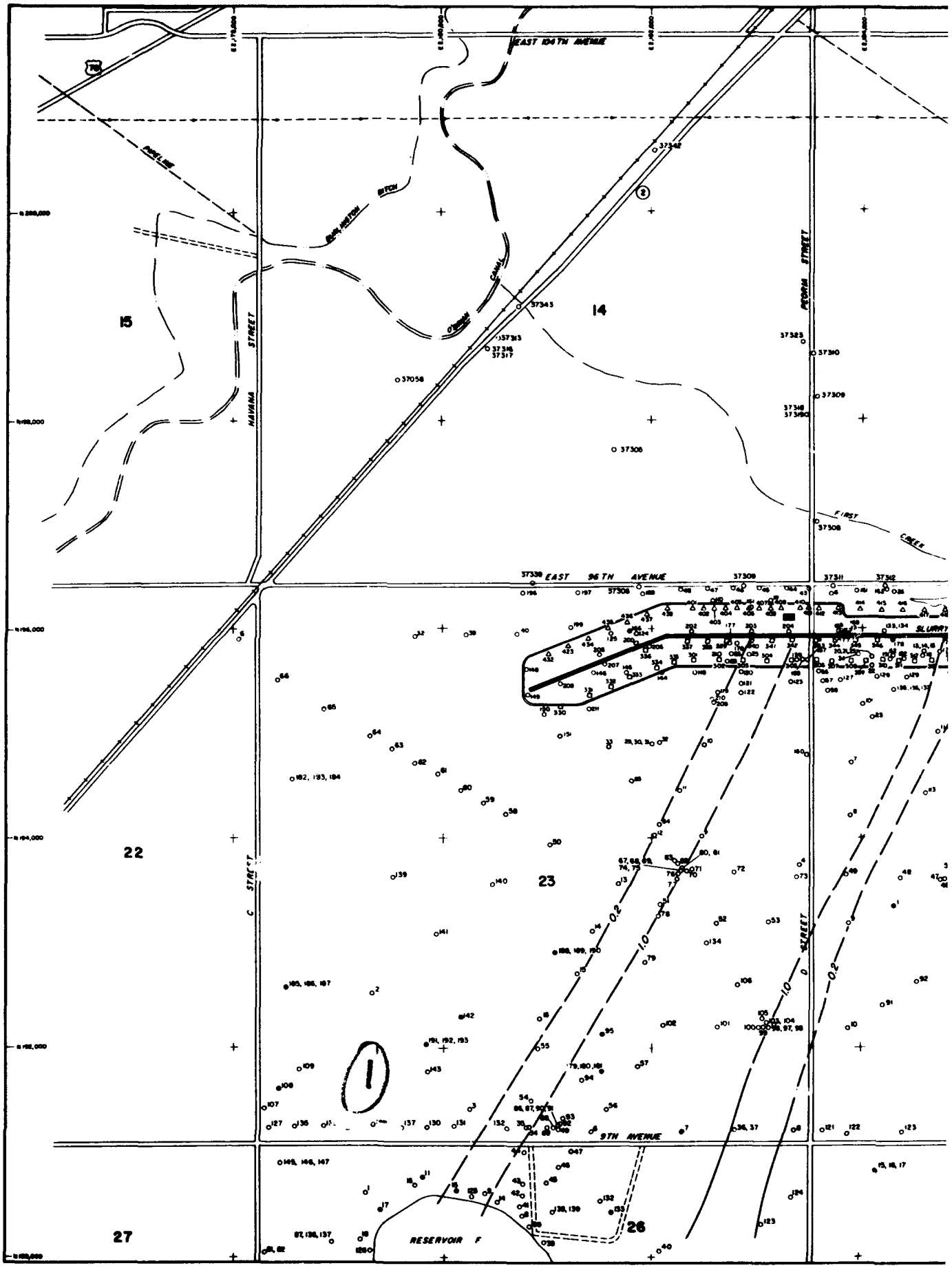
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

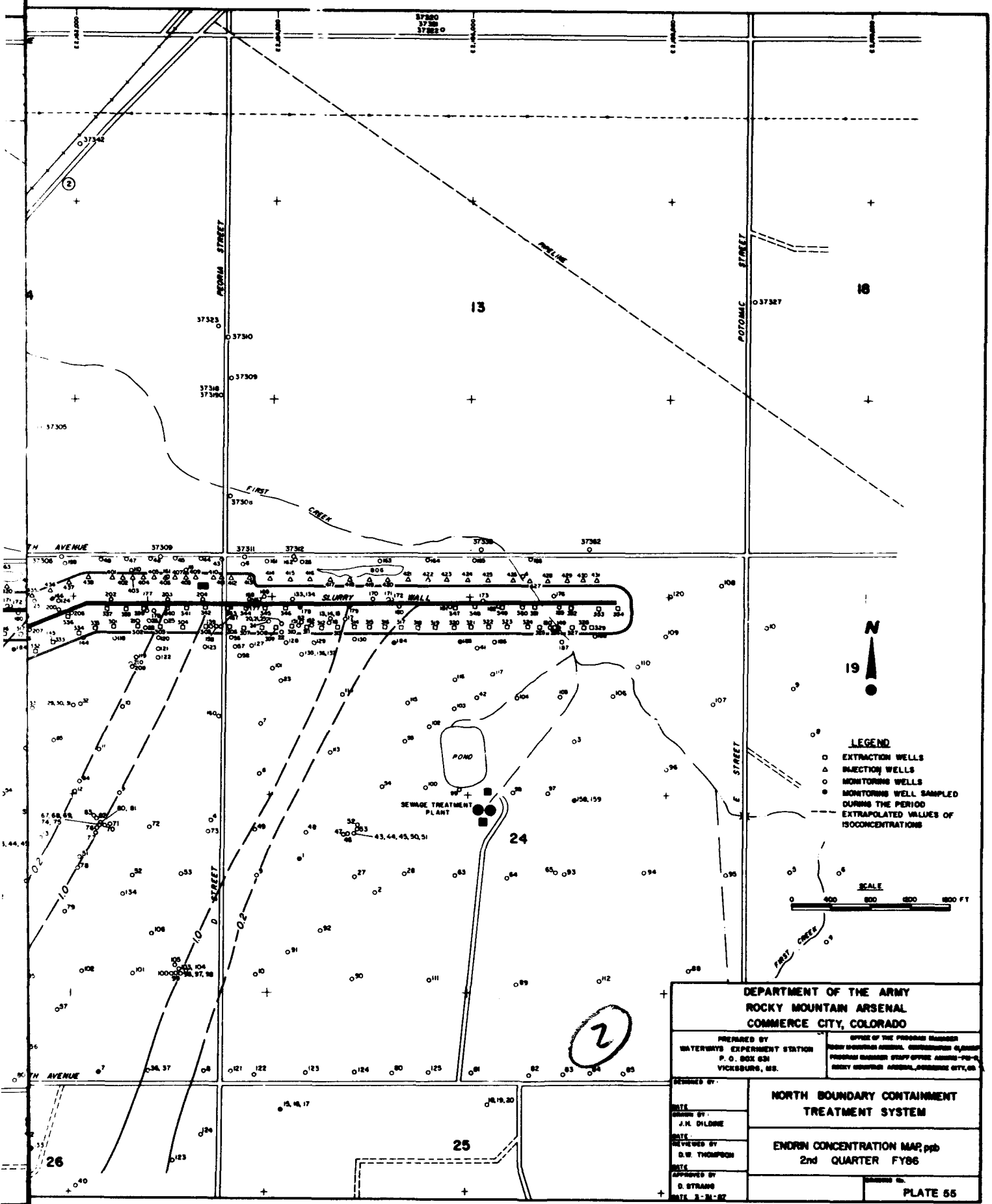
ENDRIN CONCENTRATION MAP, ppb 4th QUARTER FY 85

DRAWING No. PLATE 53


EAST 104TH AVENUE
PORT LINE
BLACK HORTON DITCH
OTHUM CANAL
HAVANA STREET
PEORIA STREET
FIRST CREEK
EAST 96TH AVENUE
SLURRY
C STREET
D STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
37342
37343
37313
37316
37317
37058
37323
37310
37309
37318
37319
37306
37308
37339
37311
37312
1.0
5.0
10.0
0.2


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
4
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DATE
DRAWN BY
J.H. DILDINE
DATE
REVIEWED BY
D.W. THOMPSON
DATE
APPROVED BY
D STRANG
DATE 3-31-87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
ENDRIN CONCENTRATION MAP, ppb
1st QUARTER FY86
PLATE 54


EAST 104TH AVENUE
PORTLINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
C STREET
E STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
1.0
0.2



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

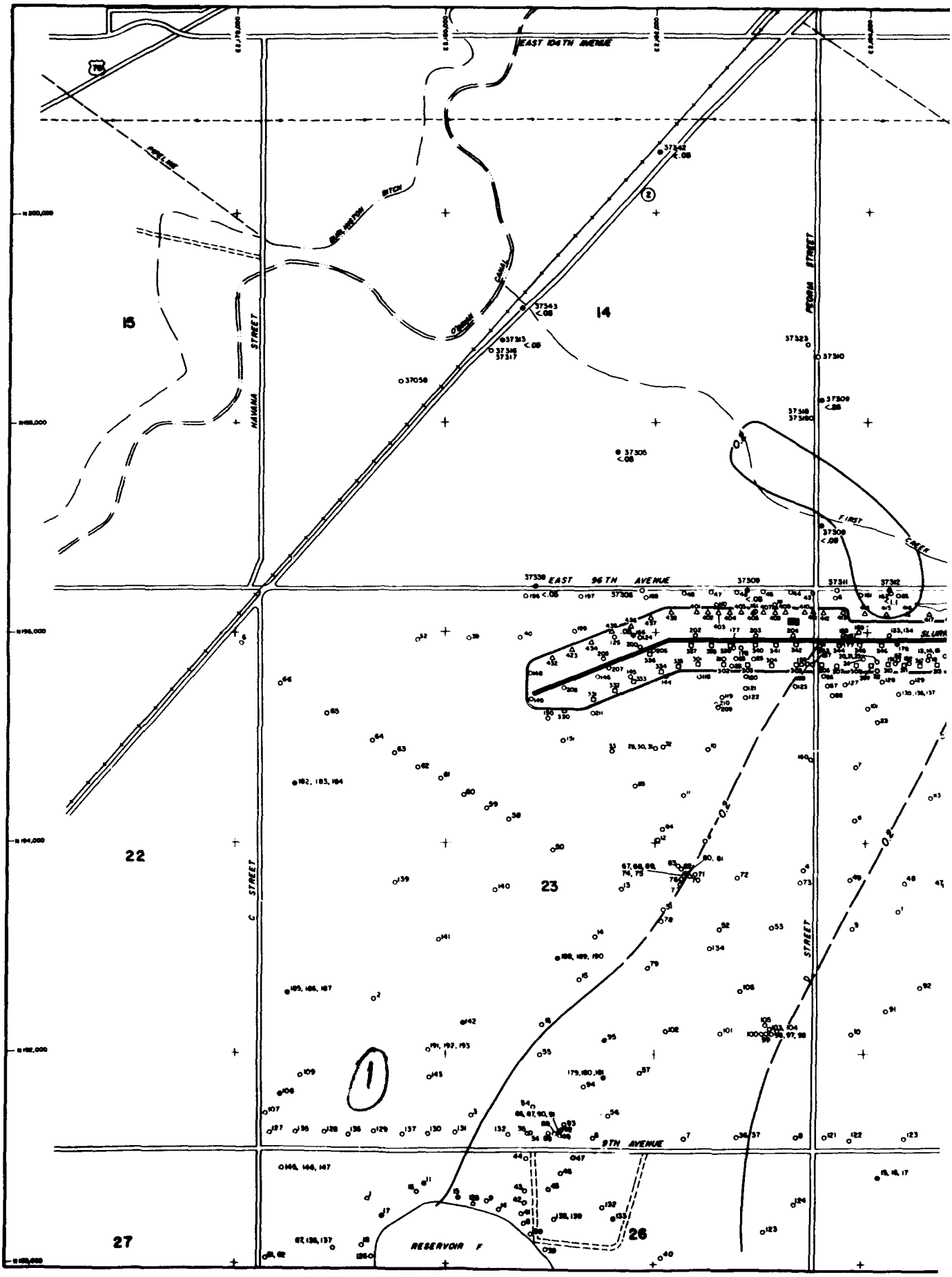
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, HEADQUARTERS CLARKE
PROGRAM MANAGER STAFF OFFICE ARSENAL-FO-O
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

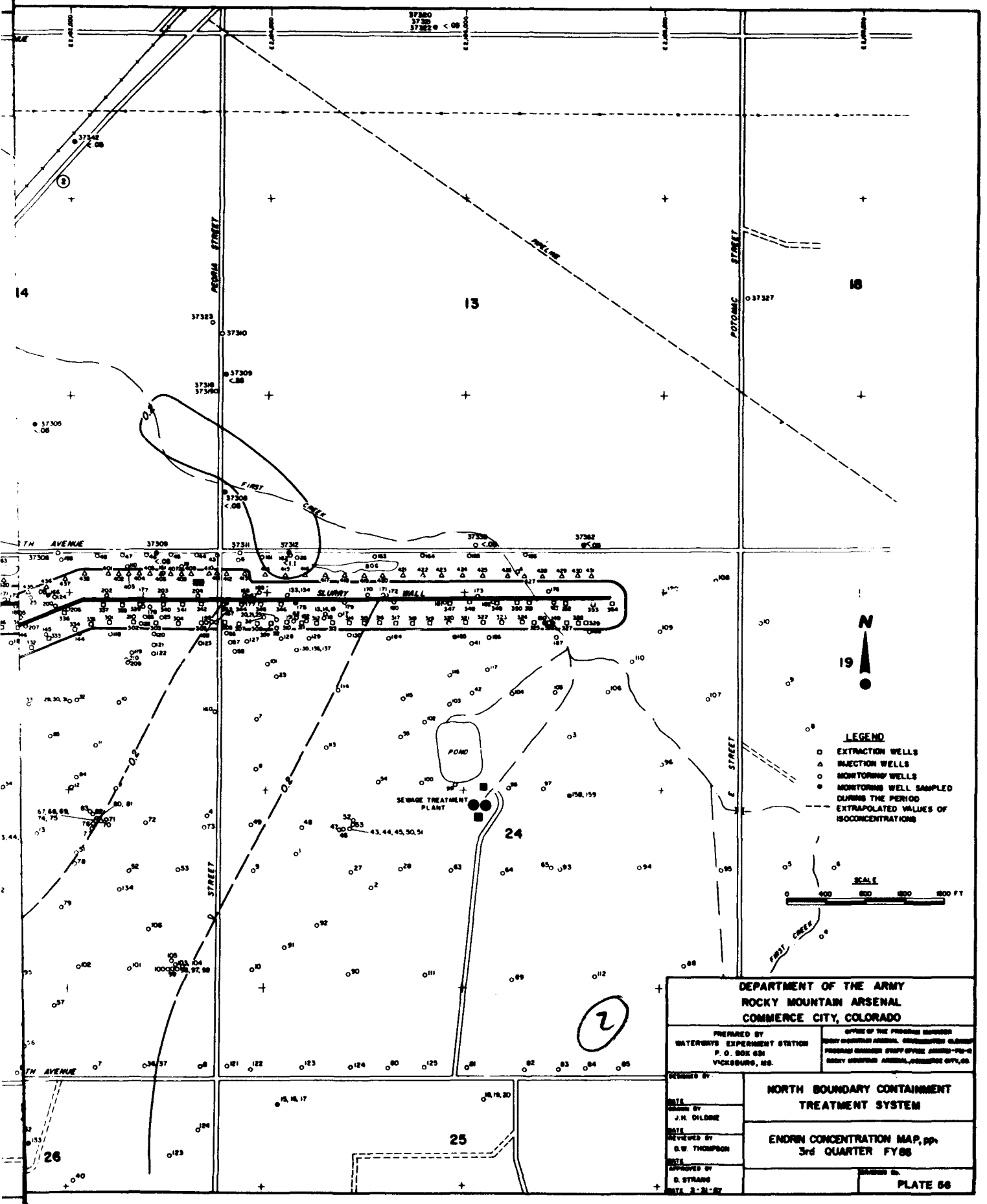
DESIGNED BY
DATE
DRAWN BY
J.H. DILORIE
DATE
REVIEWED BY
D.W. THOMPSON
DATE
APPROVED BY
D. STRAUB
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

ENDRIN CONCENTRATION MAP, ppb
2nd QUARTER FY86

DRAWING No.
PLATE 55


EAST 104TH AVENUE
PEORIA STREET
HAVANA STREET
O STREET
EAST 96TH AVENUE
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
1
0.2
0.4
0.6
0.8



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MISS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE (ARMCO-PM-R)
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATE

DRAWN BY
J.N. DILDINE

DATE

REVIEWED BY
D.W. THOMPSON

DATE

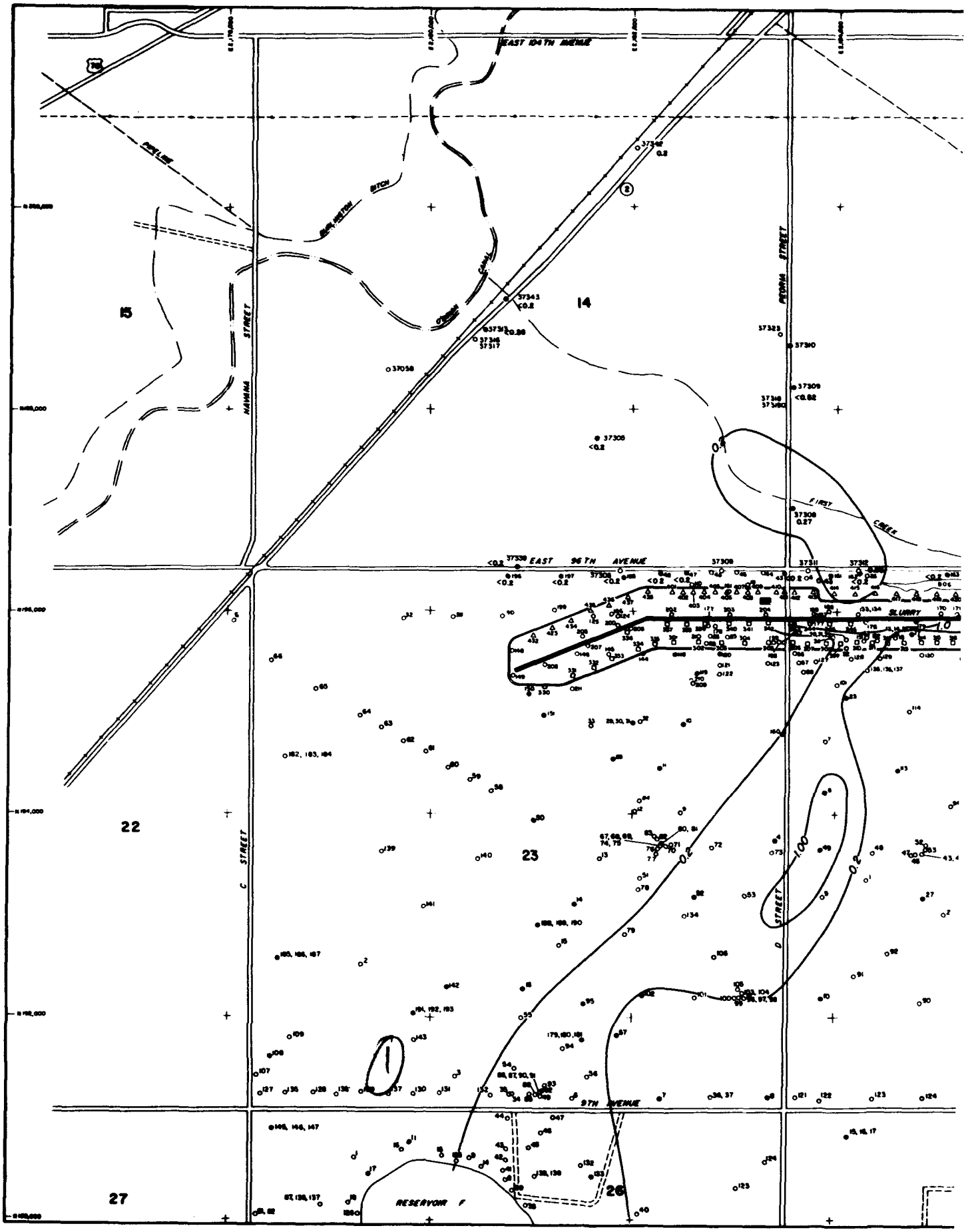
APPROVED BY
D. STRAUB

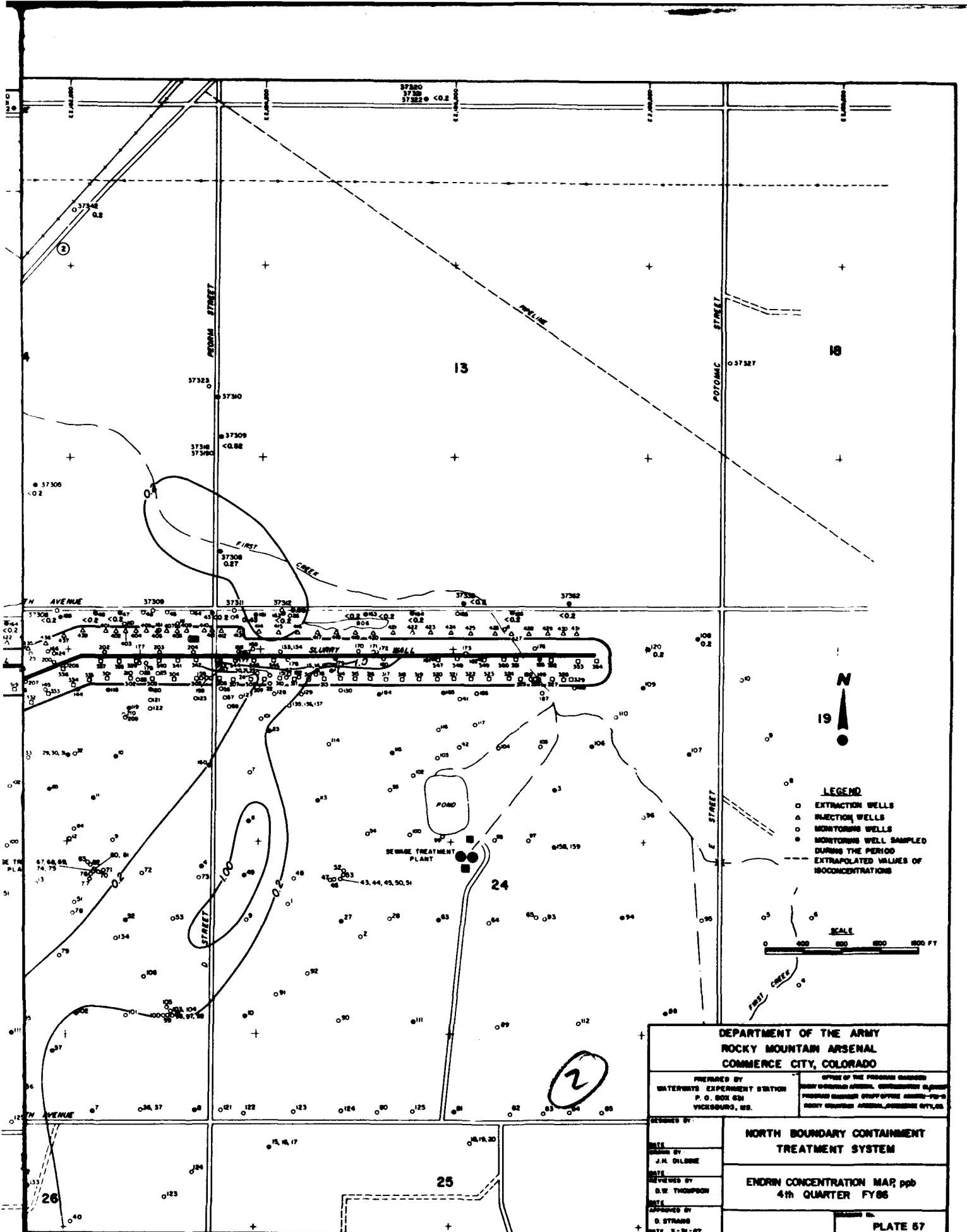
DATE 3-31-87

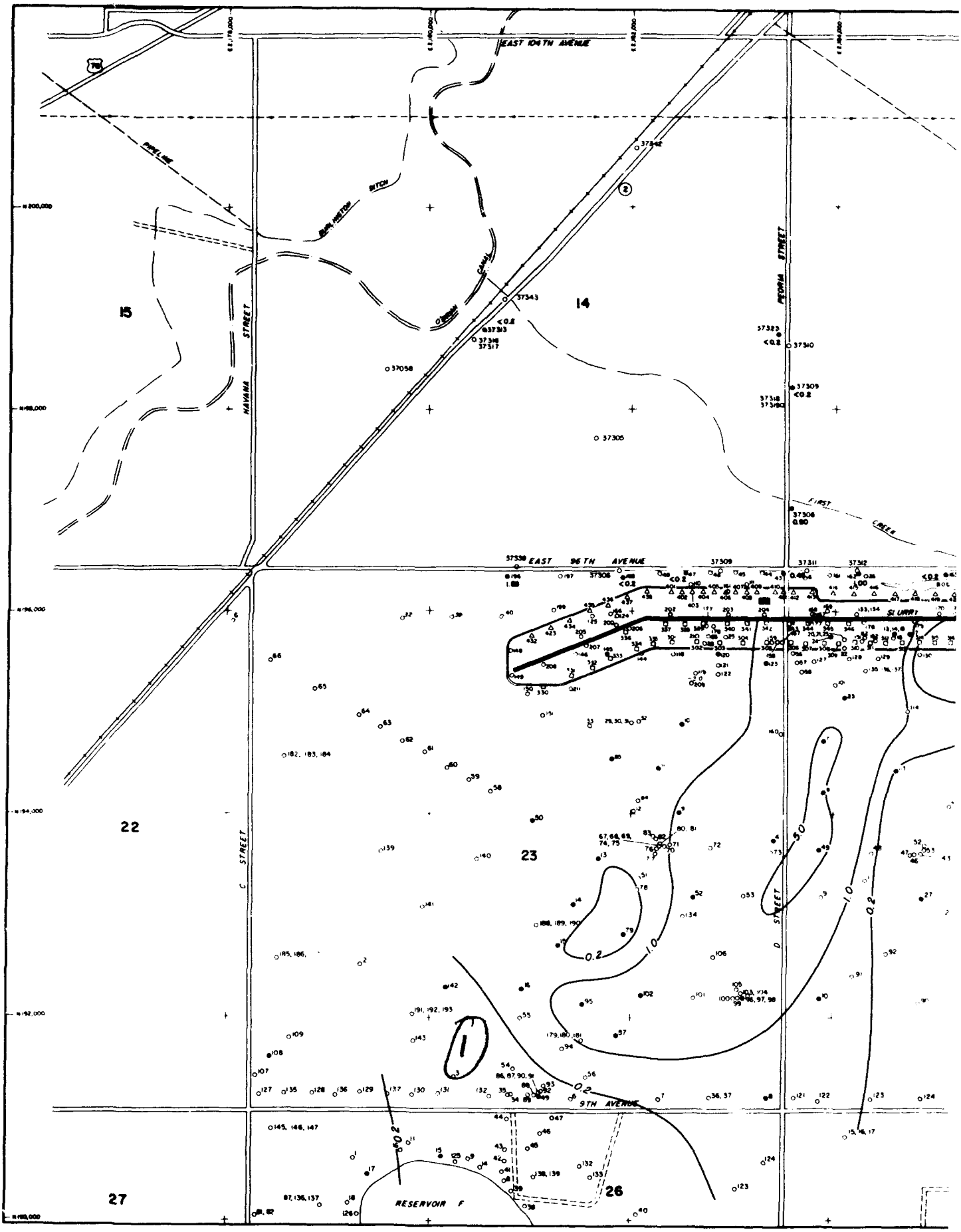
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

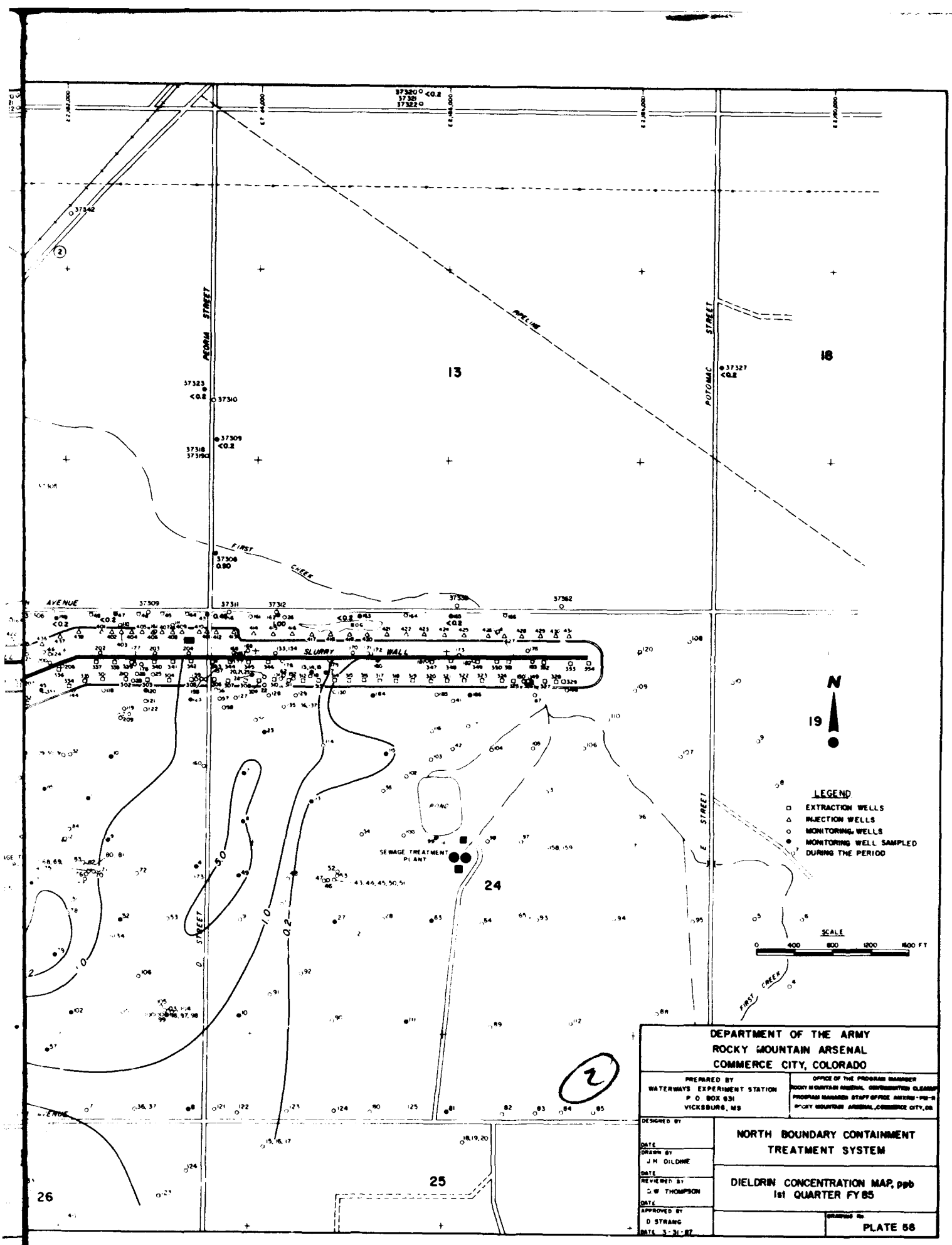
ENDRIN CONCENTRATION MAP, pp, 3rd QUARTER FY86

DRAWING No.
PLATE 56


EAST 104TH AVENUE
PIPE LINE
HAVANA STREET
PEORIA STREET
FIRST CREEK
EAST 96TH AVENUE
SLURRY
C STREET
D STREET
96TH AVENUE
RESERVOIR F
15
14
22
23
26
27
37343
37346
37317
37308
37309
37310
37323
37311
37312
37338
37339
37058
<0.2
0.88
0.27
1.0
0.2
1.00


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
0.2
1.00
1.5
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 631 VICKSBURG, MS.
DESIGNED BY
DRAWN BY J.H. DILSONE
REVIEWED BY D.W. THOMPSON
APPROVED BY D. STRAUB
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
ENDRIN CONCENTRATION MAP, ppb
4th QUARTER FY86
PLATE 57


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
O STREET
FIRST CREEK
RESERVOIR F
15
14
22
23
27
26
1.0
0.2
5.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P O BOX 631
VICKSBURG, MS

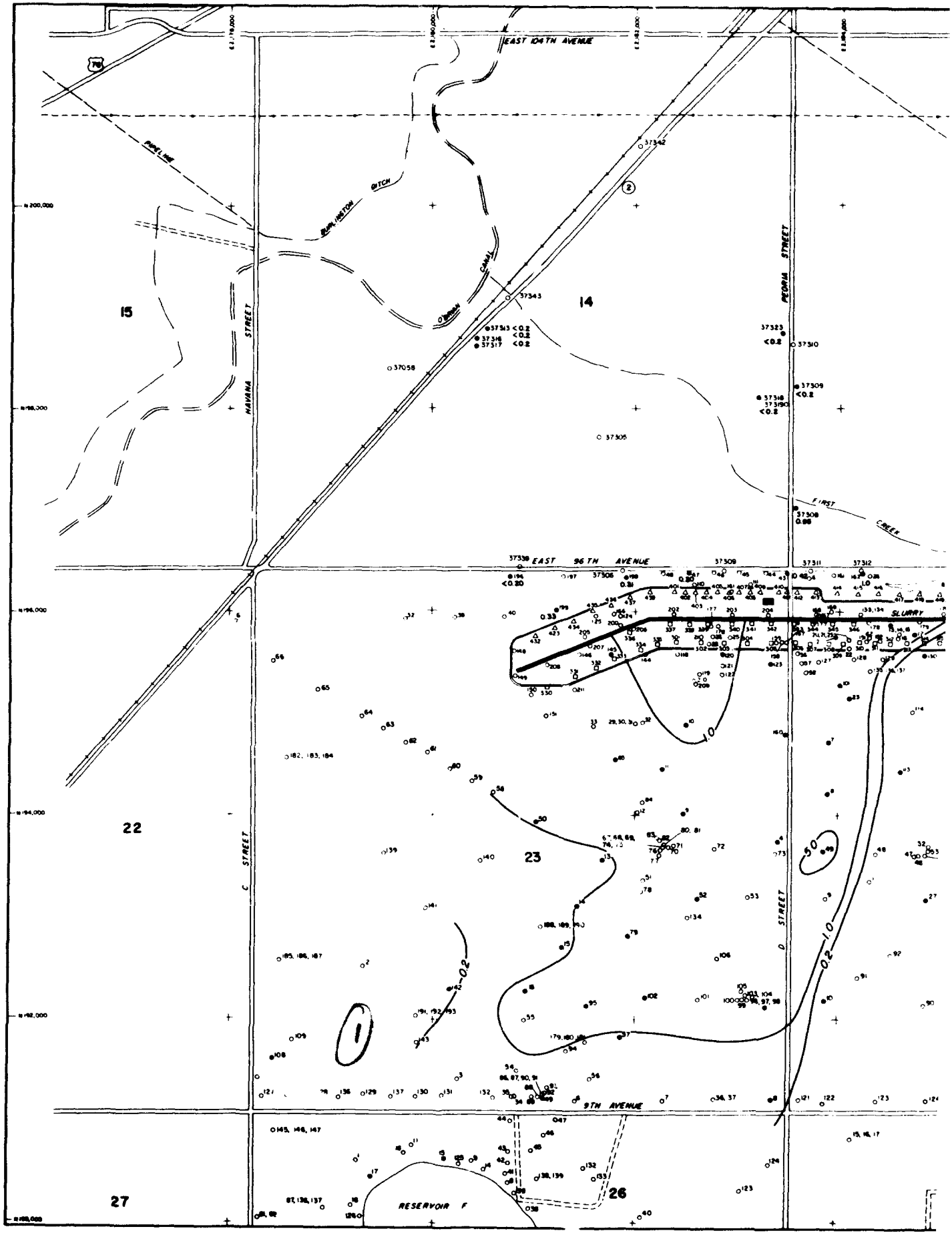
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ARMY-PM-RM
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

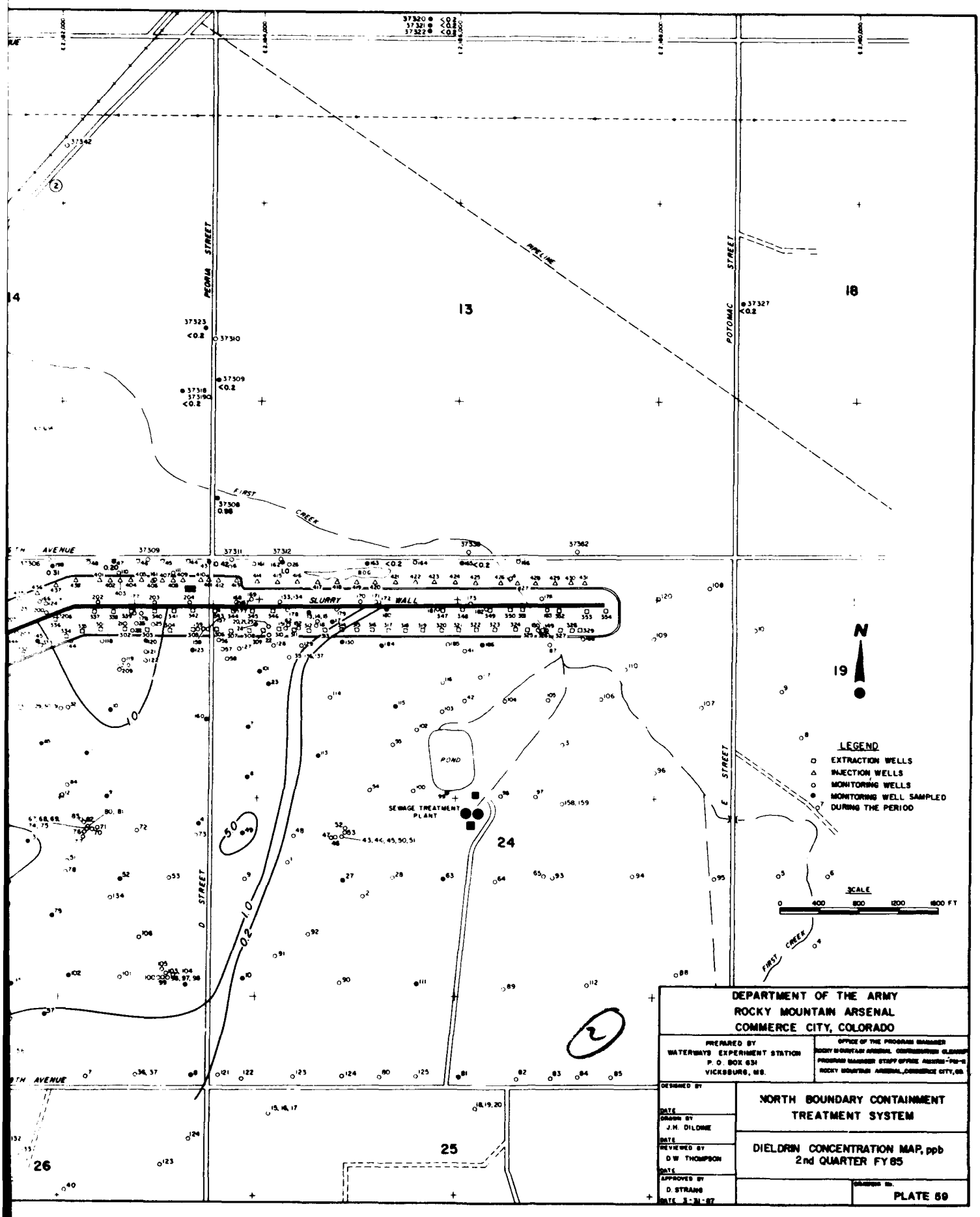
DESIGNED BY
DATE
DRAWN BY J H DILDINE
DATE
REVIEWED BY D W THOMPSON
DATE
APPROVED BY D STRANG
DATE 5-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

DIELDRIN CONCENTRATION MAP, ppb 1st QUARTER FY 85

DRAWING NO.
PLATE 58


EAST 104TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
D STREET
EAST 96TH AVENUE
9TH AVENUE
SLURRY
RESERVOIR F
15
14
22
23
27
26
37343
37342
37058
37305
37306
37307
37308
37309
37310
37311
37312
37323
37338
37339
37340
37341
37343 <0.2
37316 <0.2
37317 <0.2
37308 0.88
37318 <0.2
37319 <0.2
0.33
<0.20
1.0
0.2
0.50



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

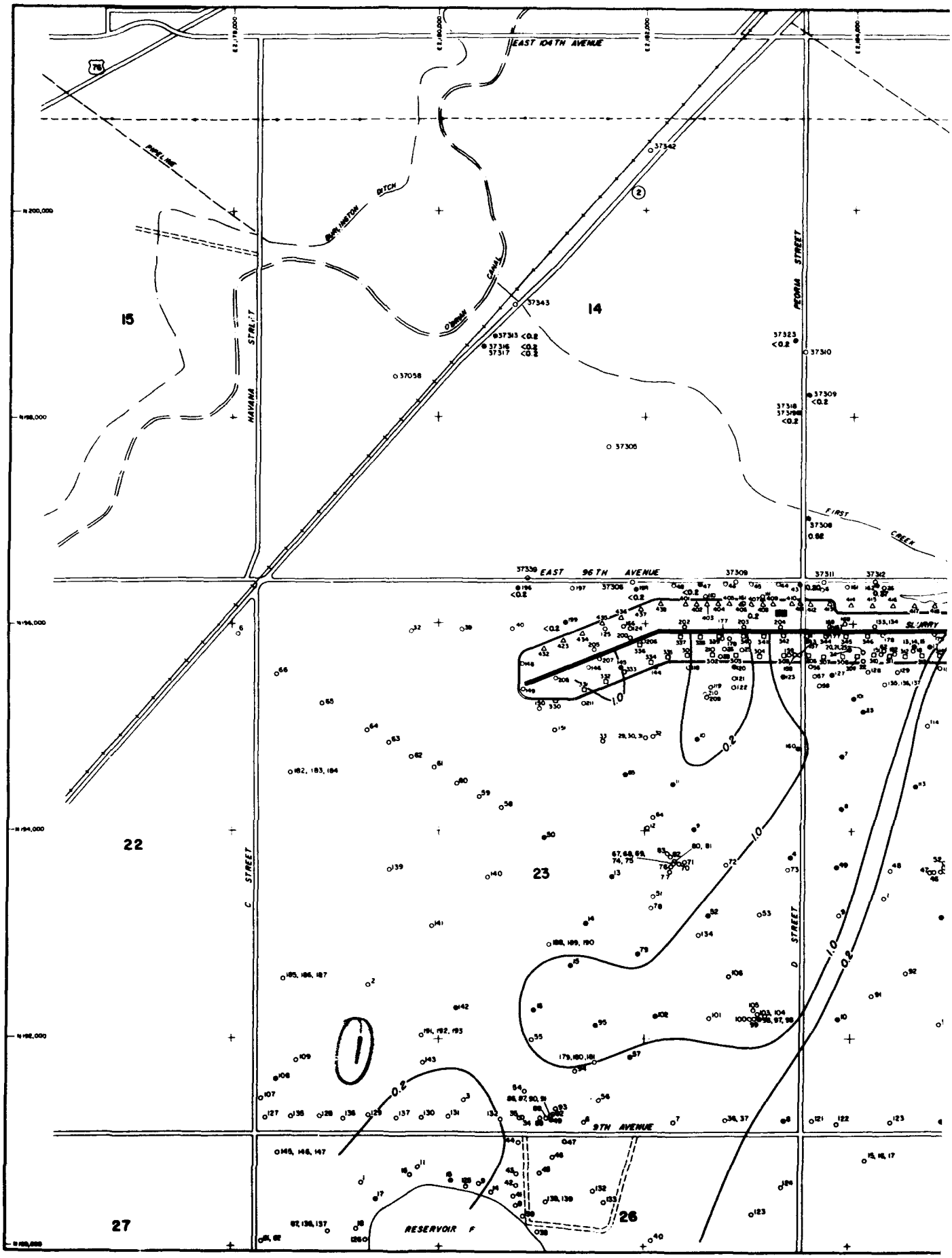
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ARLSCO-PM-C
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

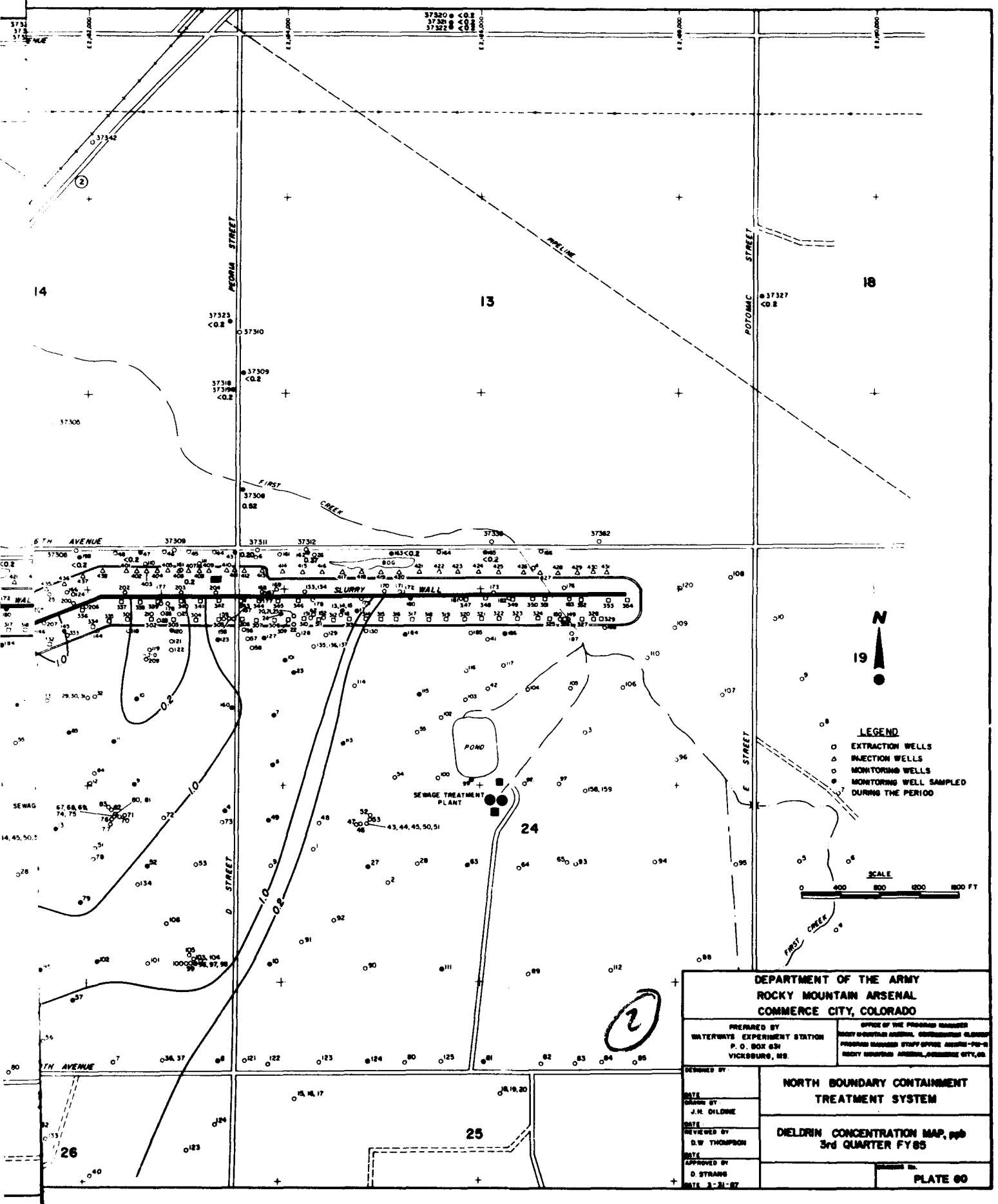
DESIGNED BY
DATE
DRAWN BY J.H. DILDINE
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY D. STRAINS
DATE 5-31-87

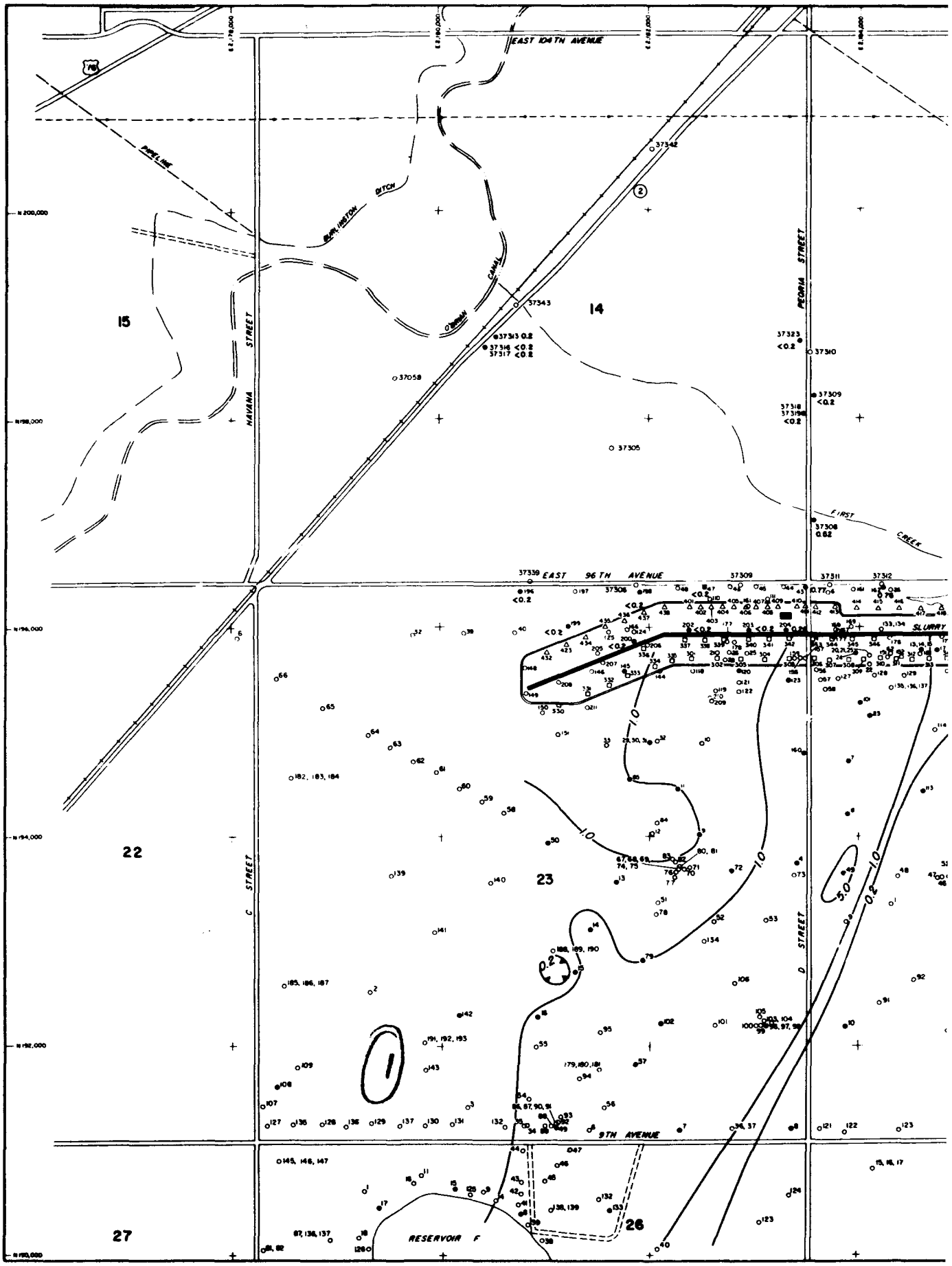
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

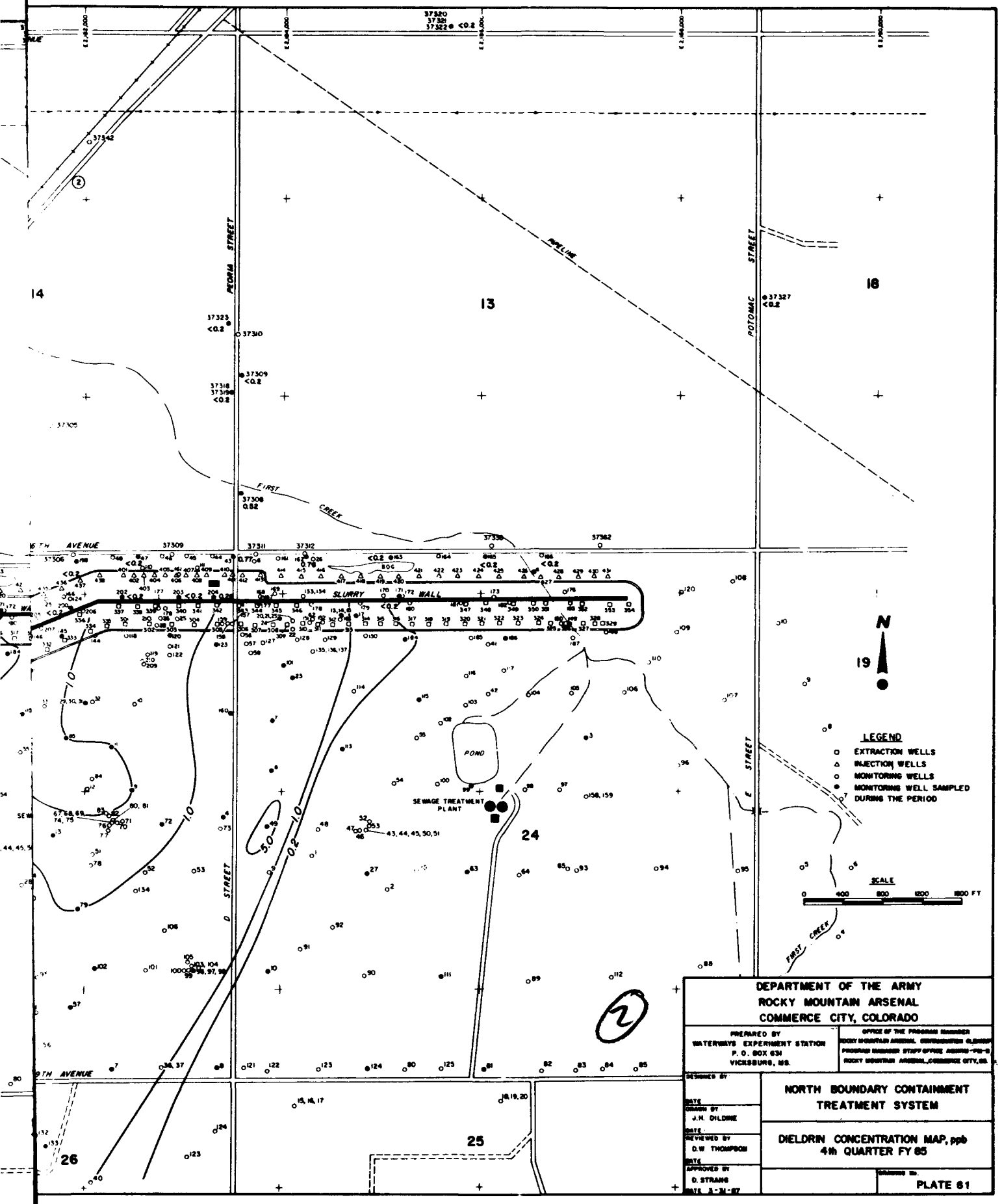
DIELDRIN CONCENTRATION MAP, ppb
2nd QUARTER FY 85

DRAWING NO.
PLATE 59


EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
SLURRY
C STREET
D STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
37342
37343
37313 <0.2
37316 <0.2
37317 <0.2
37323 <0.2
37340
37309 <0.2
37318 <0.2
37058
37305
37306 0.62
37339
37308
37311
37312
1.0
0.2
0.8


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
SEWAGE TREATMENT PLANT
POND
D STREET
E STREET
6TH AVENUE
14
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY J.H. DILORIE
REVIEWED BY D.W THOMPSON
APPROVED BY D. STRAHS
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DIELDRIN CONCENTRATION MAP, ppb
3rd QUARTER FY85
PLATE 60


EAST 104TH AVENUE
PARK LINE
BERKSHIRE DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
SLURRY
G STREET
D STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
37342
37343
37313 0.2
37316 <0.2
37317 <0.2
37058
37305
37323 <0.2
37340
37309 <0.2
37318 <0.2
37319 <0.2
37308 0.82
37339 <0.2
37306
37309
37311
37312
1.0
0.2
5.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ARMRD-PM-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DRAWN BY
J.H. DILDINE

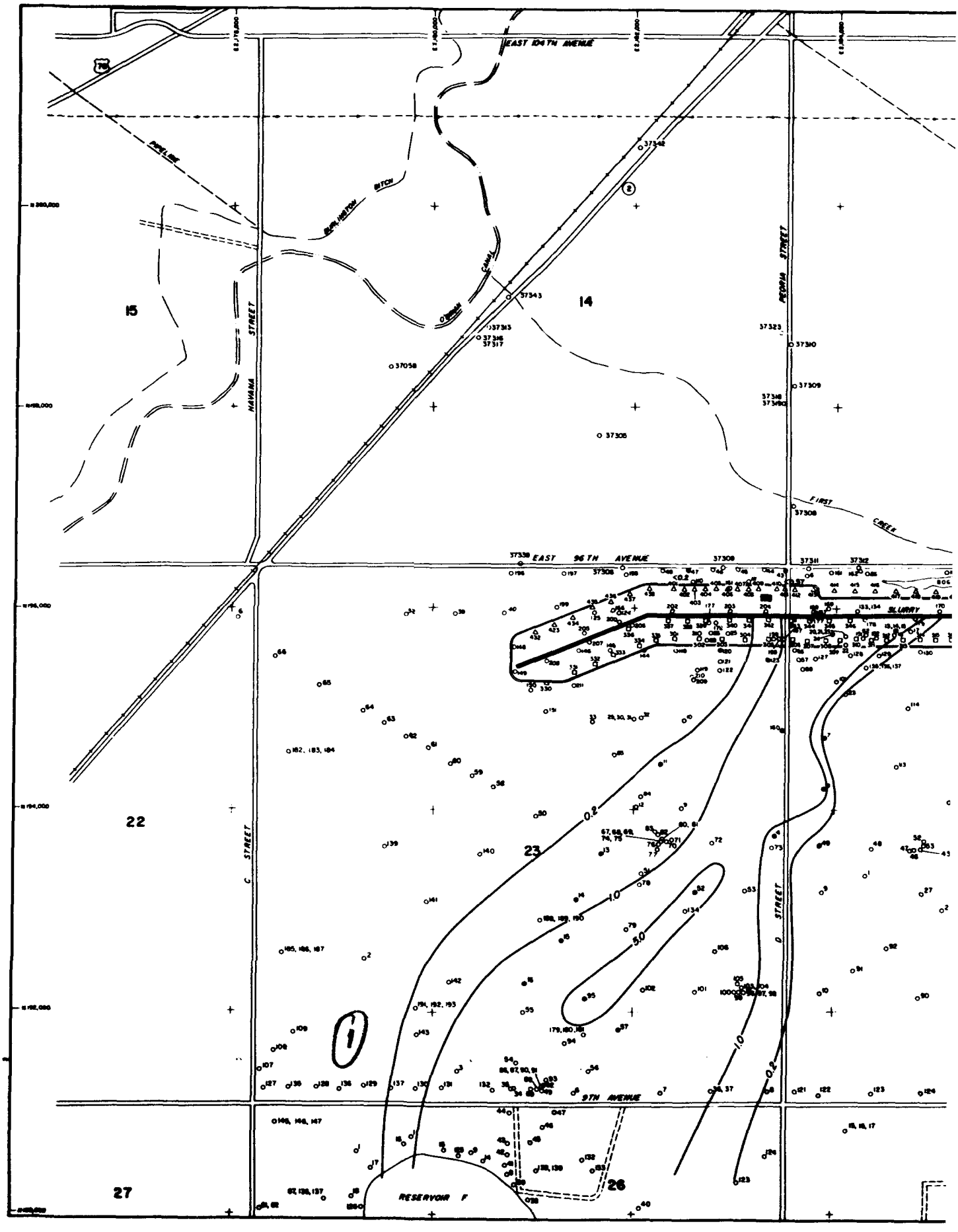
REVIEWED BY
D.W. THOMPSON

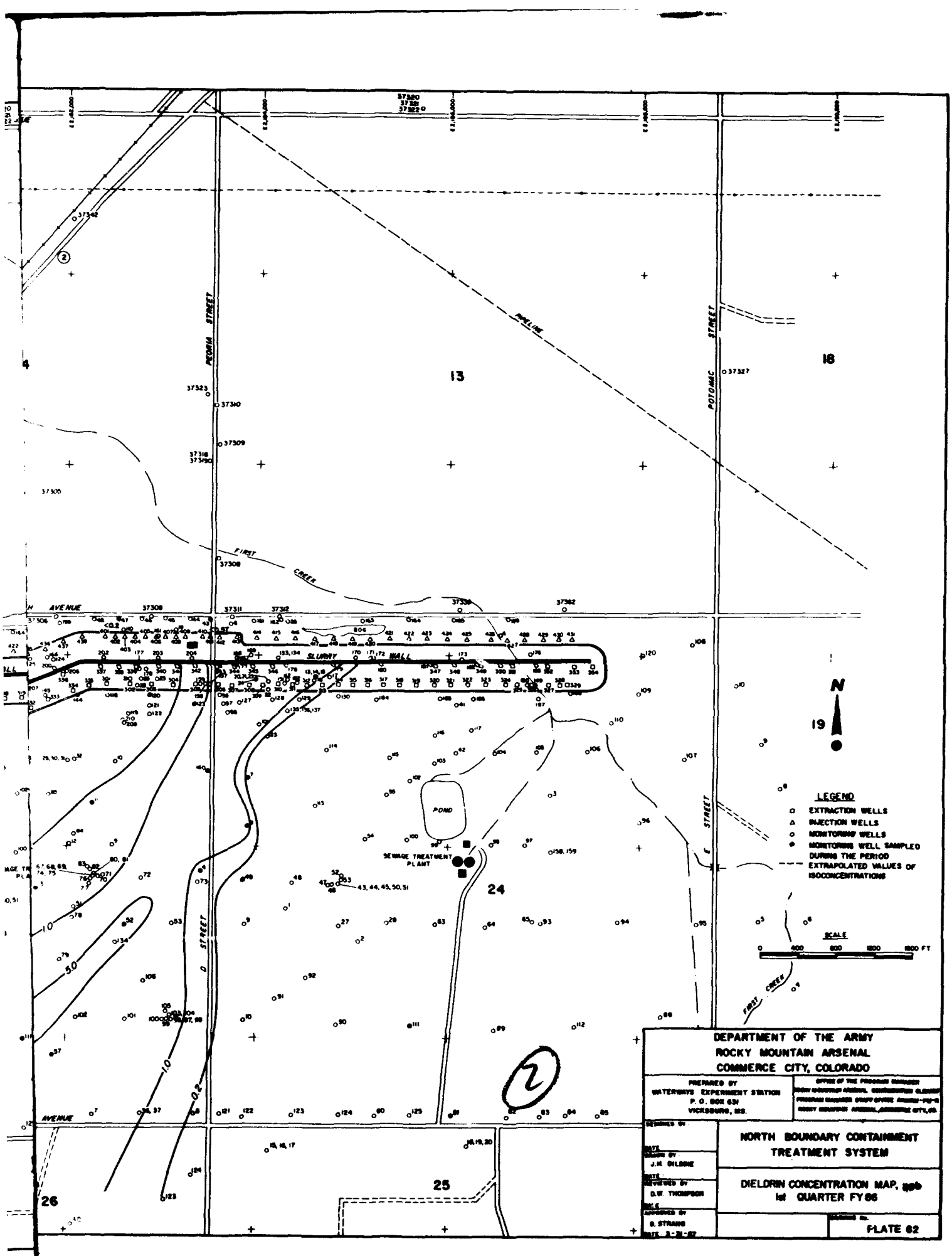
APPROVED BY
D. STRAHS
DATE 3-31-87

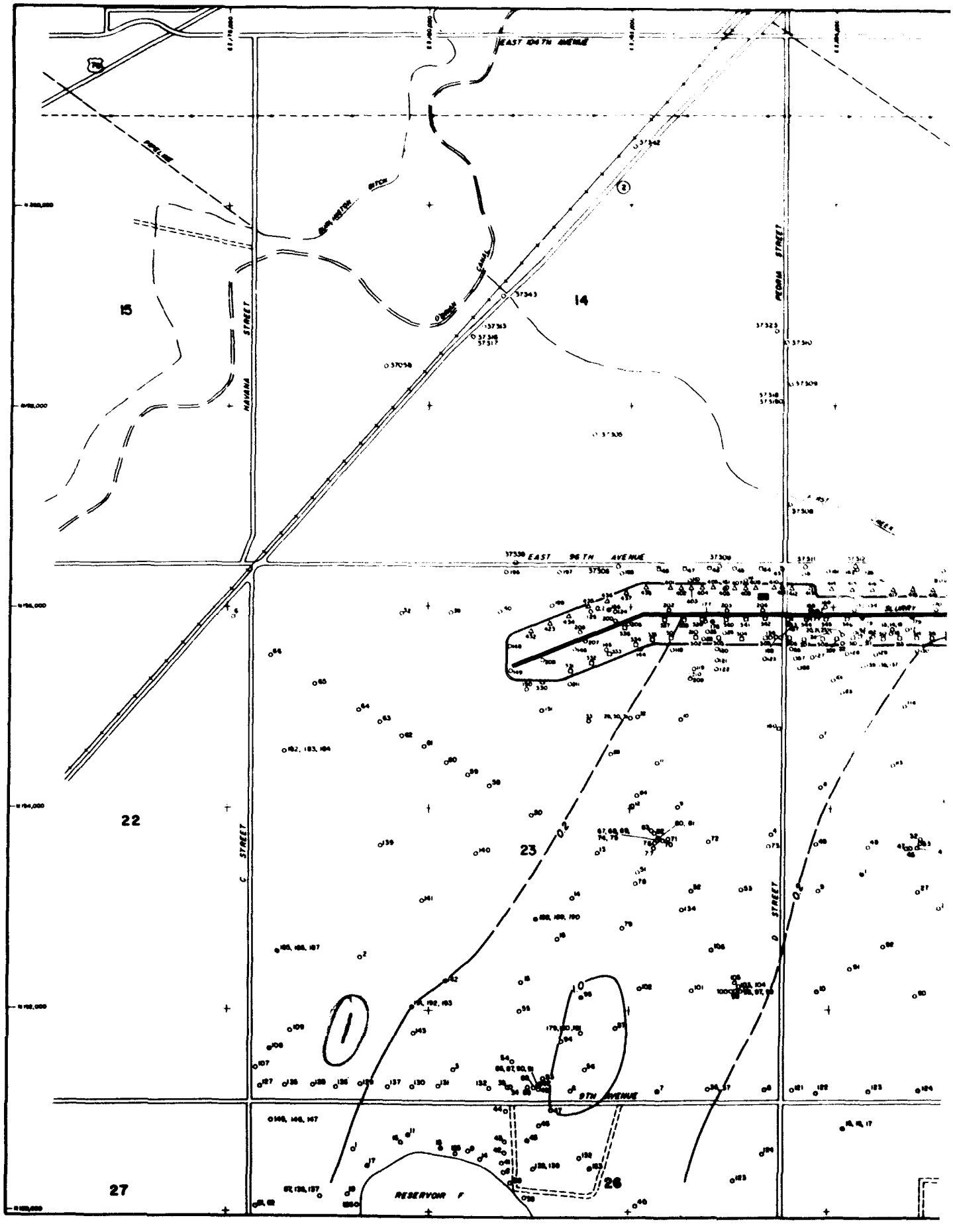
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

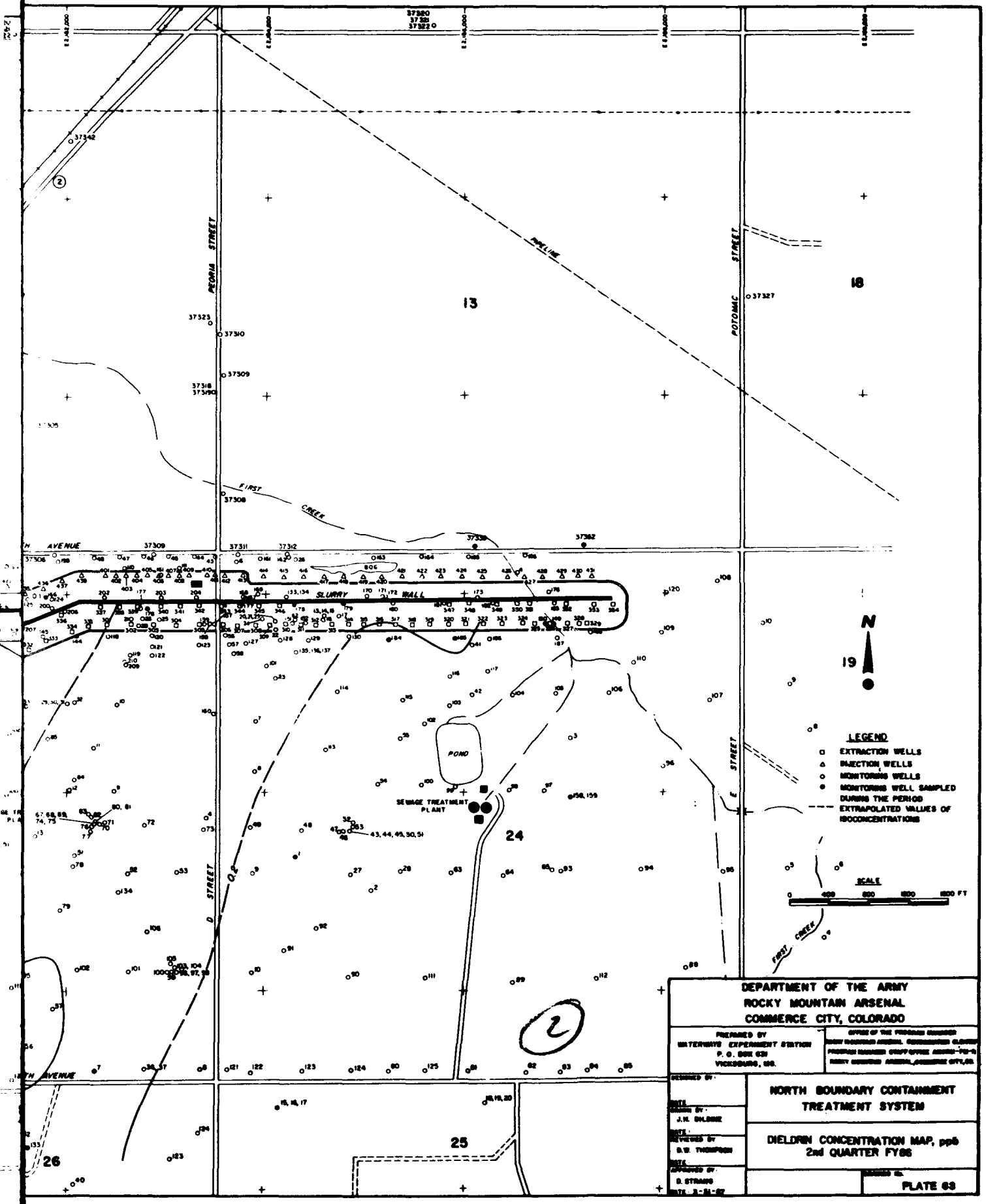
DIELDRIN CONCENTRATION MAP, ppb
4th QUARTER FY 85

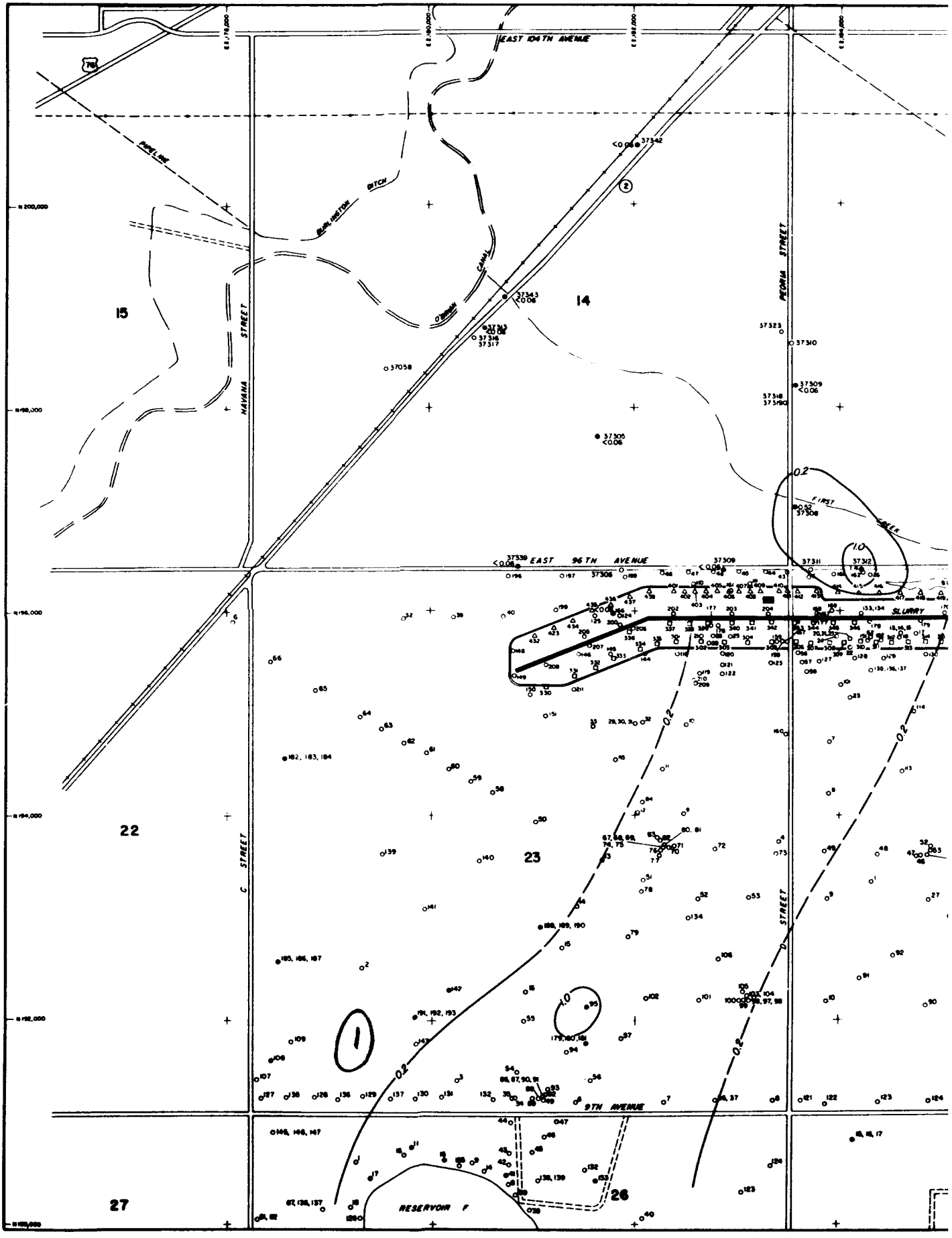
DRAWING NO.
PLATE 61

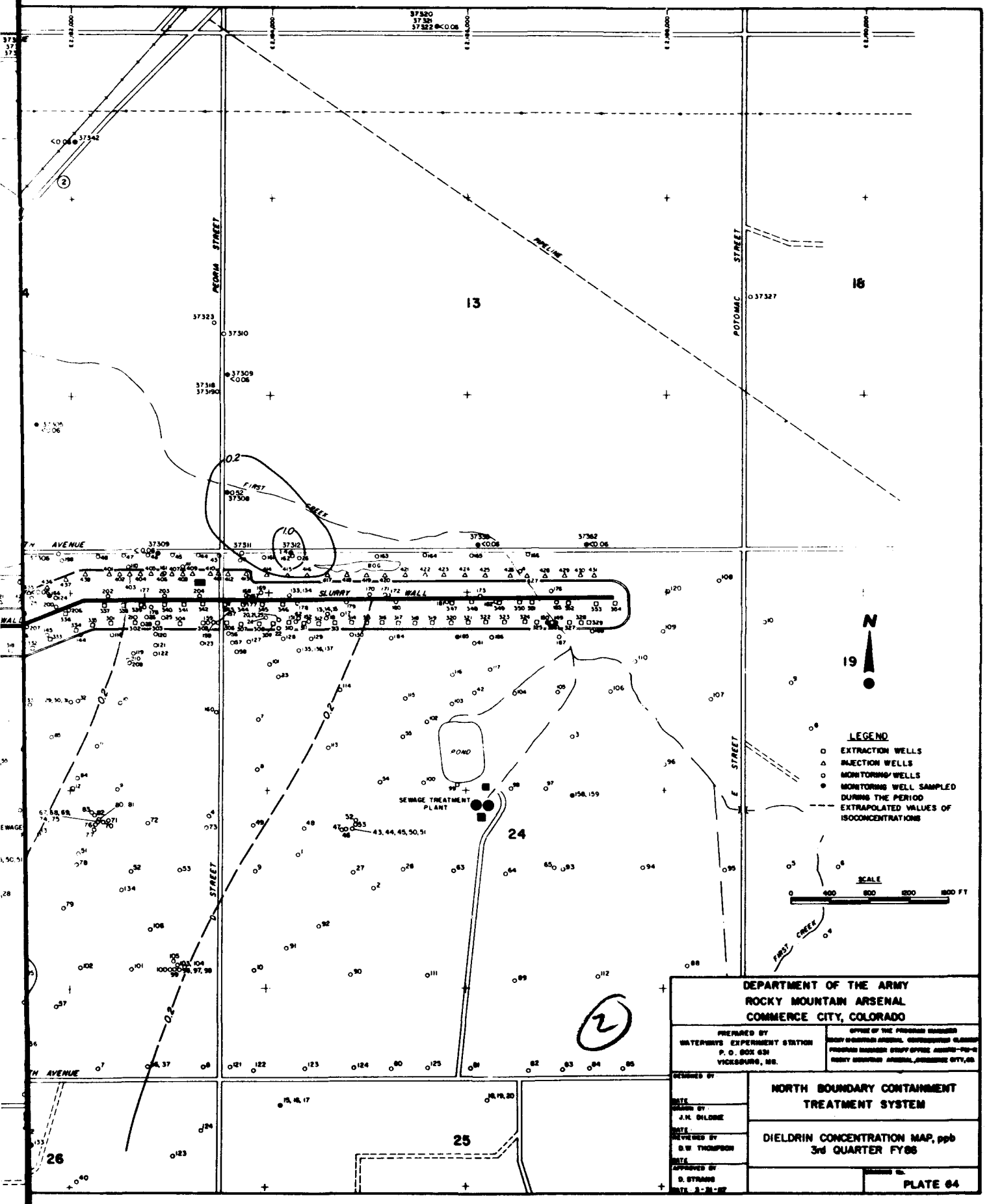

EAST 104TH AVENUE
PARK LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
C STREET
D STREET
97TH AVENUE
RESERVOIR F
SLURRY
15
14
22
23
26
27
37338
37339
37340
37341
37342
37343
37344
37345
37346
37347
37348
37349
37058
37305
37306
37307
37308
37309
37310
37311
37312
37323
0.2
1.0
5.0


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
D STREET
E STREET
AVENUE
13
18
19
24
25
26
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1200 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY
J.M. GILSINE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
B. STRANO
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DIELDRIN CONCENTRATION MAP, 1st QUARTER FY86
PLATE 62


EAST 104TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
EAST 96TH AVENUE
9TH AVENUE
RESERVOIR 1
15
14
22
23
26
27


PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1600 2400 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DIELDRIN CONCENTRATION MAP, ppb
2nd QUARTER FY86
PLATE 63


EAST 104TH AVENUE
PIPELINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
SLURRY
C STREET
D STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
6
2
37342
37343
37316
37317
37058
37305
37339
37308
37309
37311
37312
37323
37340
37318
37319
37306
0.2
1.0
1
<0.06



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATED CLEANUP
PROGRAM MANAGER (STAFF OFFICE) AMXRO-PO-M
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATE

DRAWN BY
J.H. DILORIE

DATE

REVIEWED BY
D.W. THOMPSON

DATE

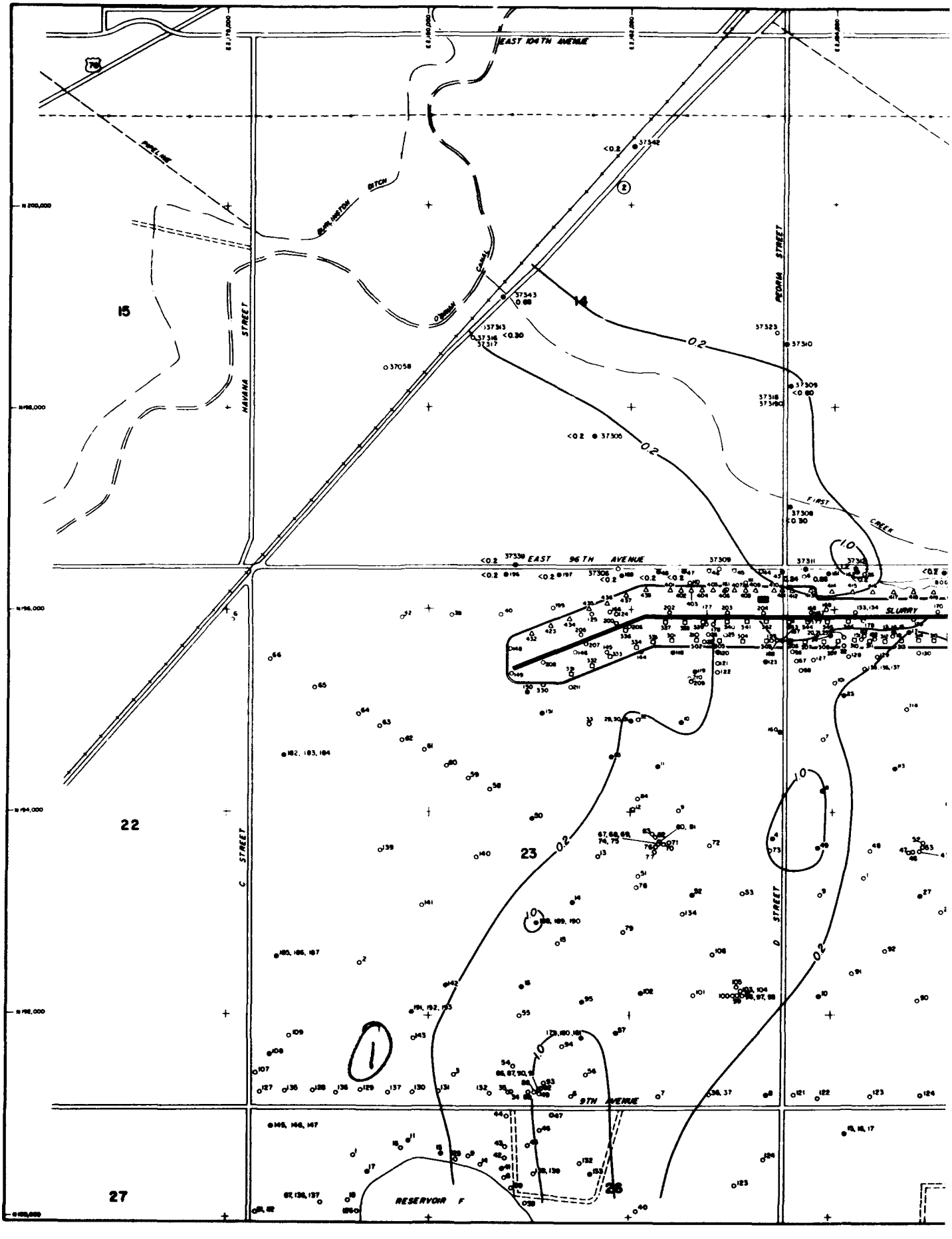
APPROVED BY
D. STRAUB

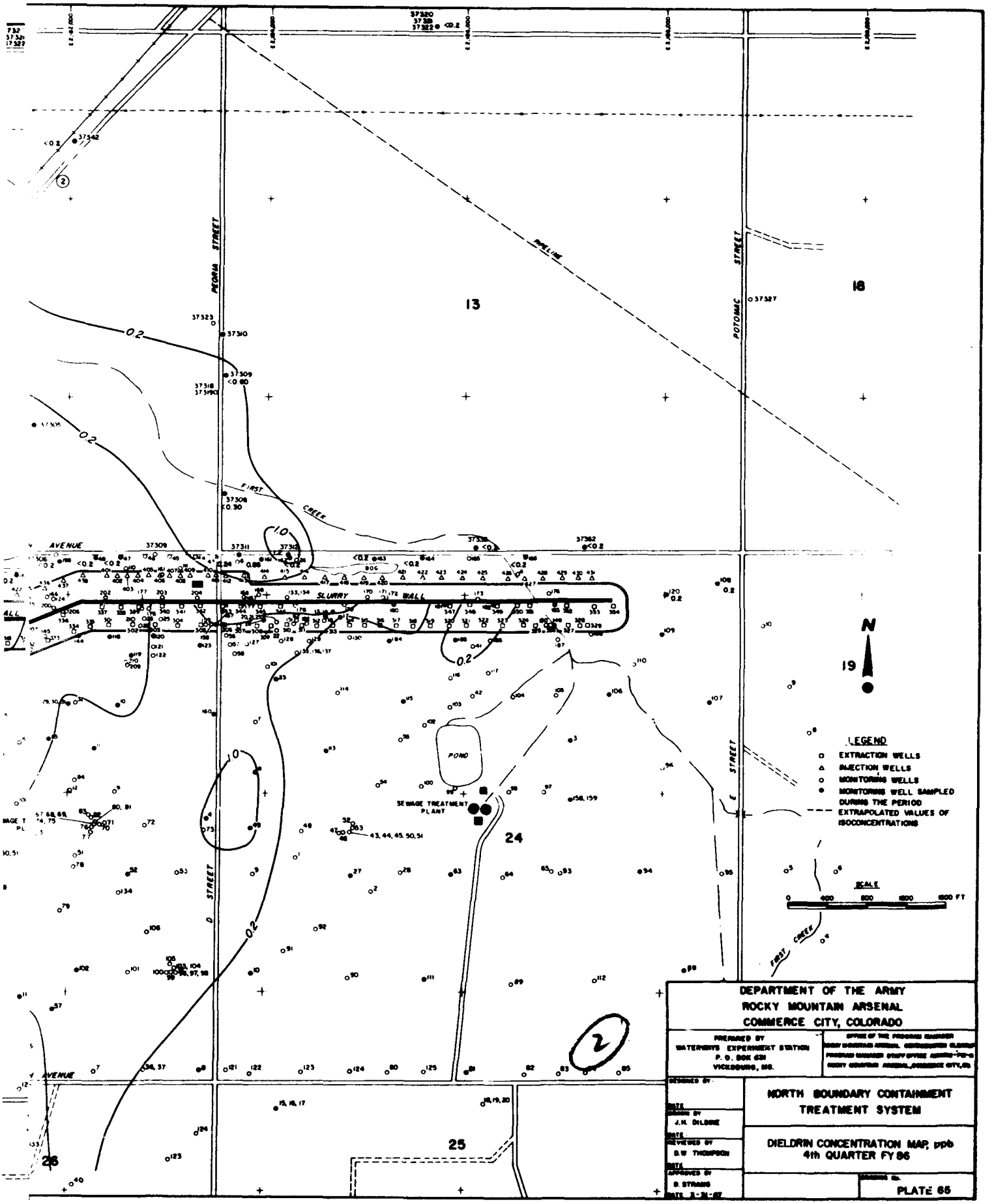
DATE 3-31-87

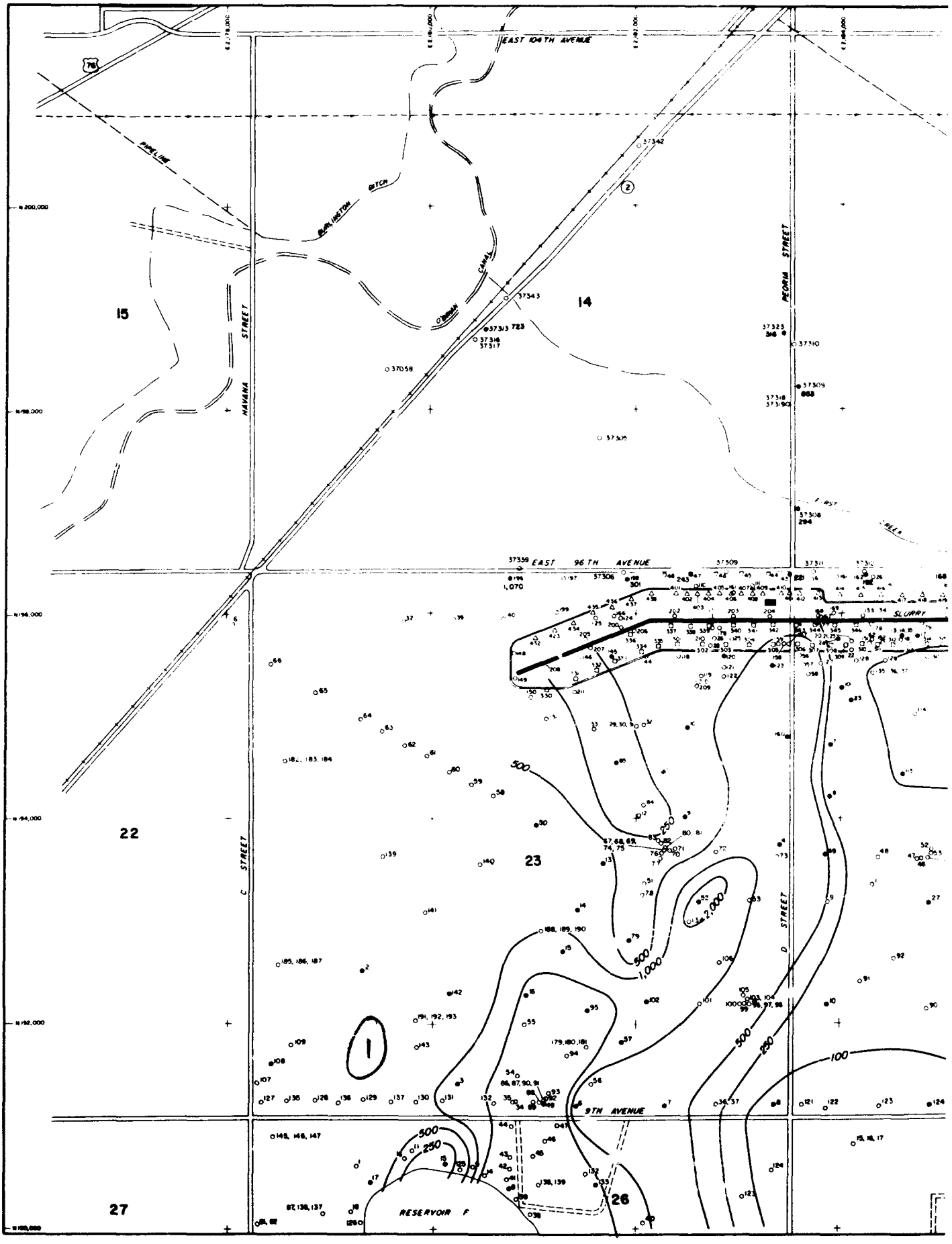
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

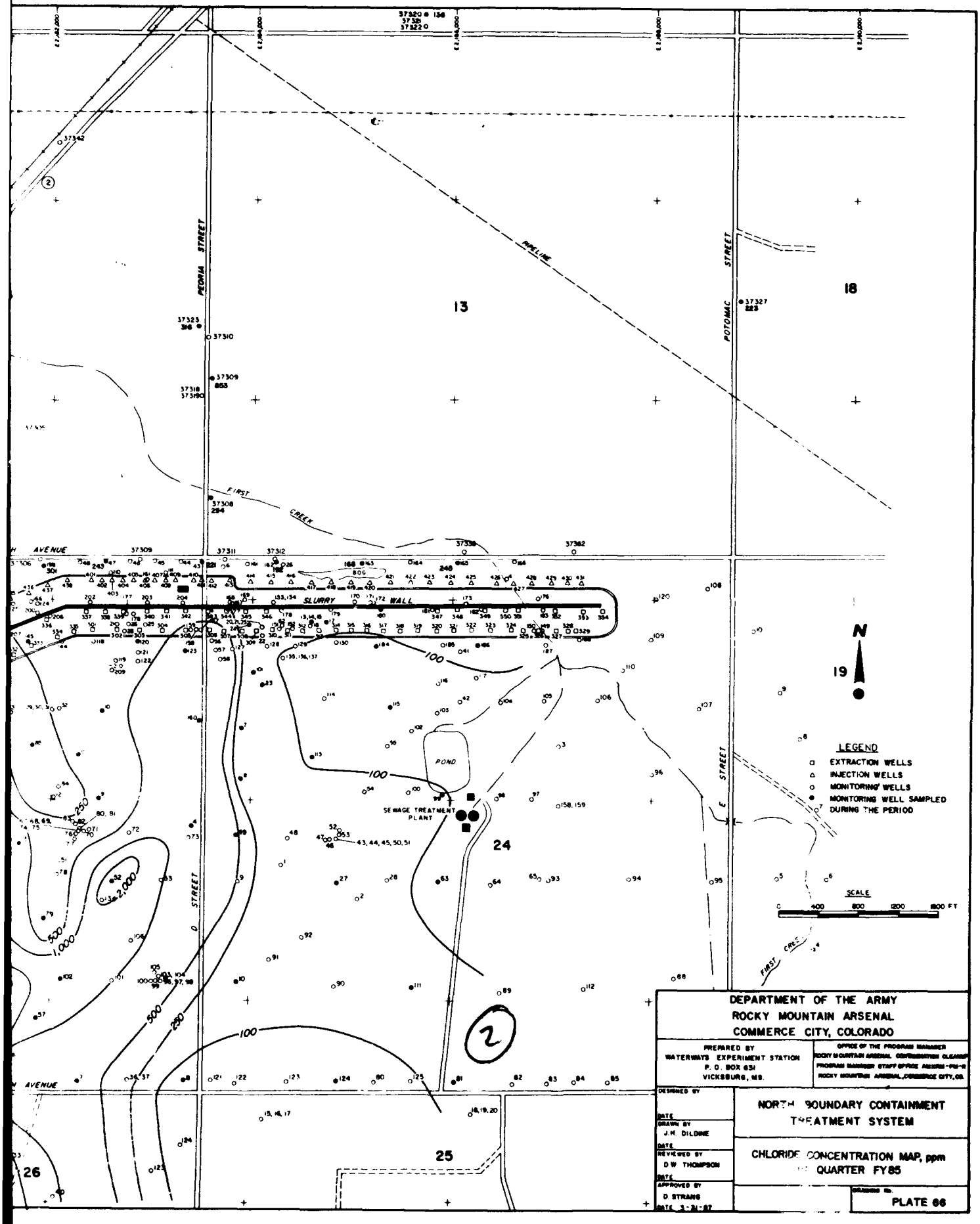
DIELDRIN CONCENTRATION MAP, ppb
3rd QUARTER FY86

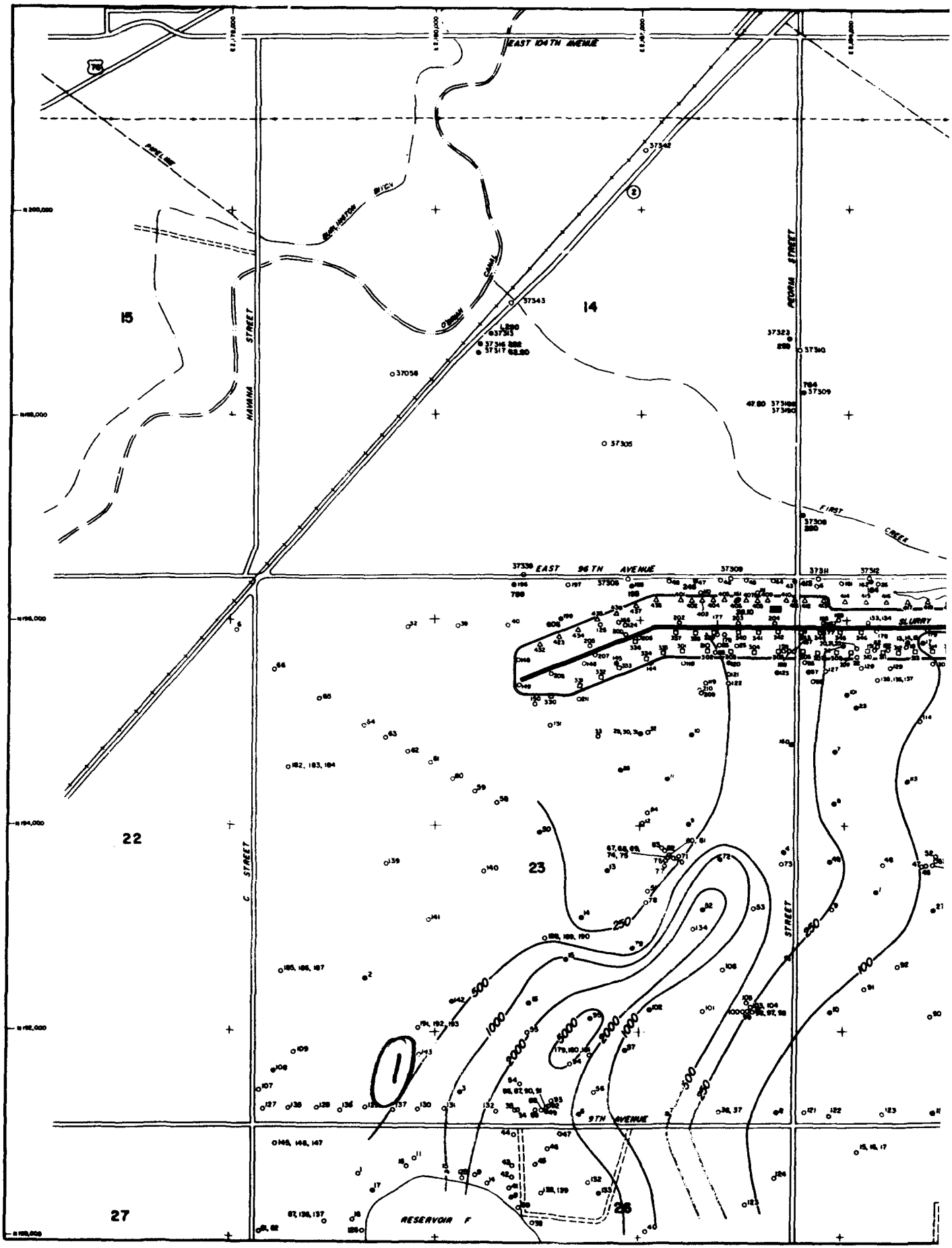
DRAWING NO.
PLATE 64

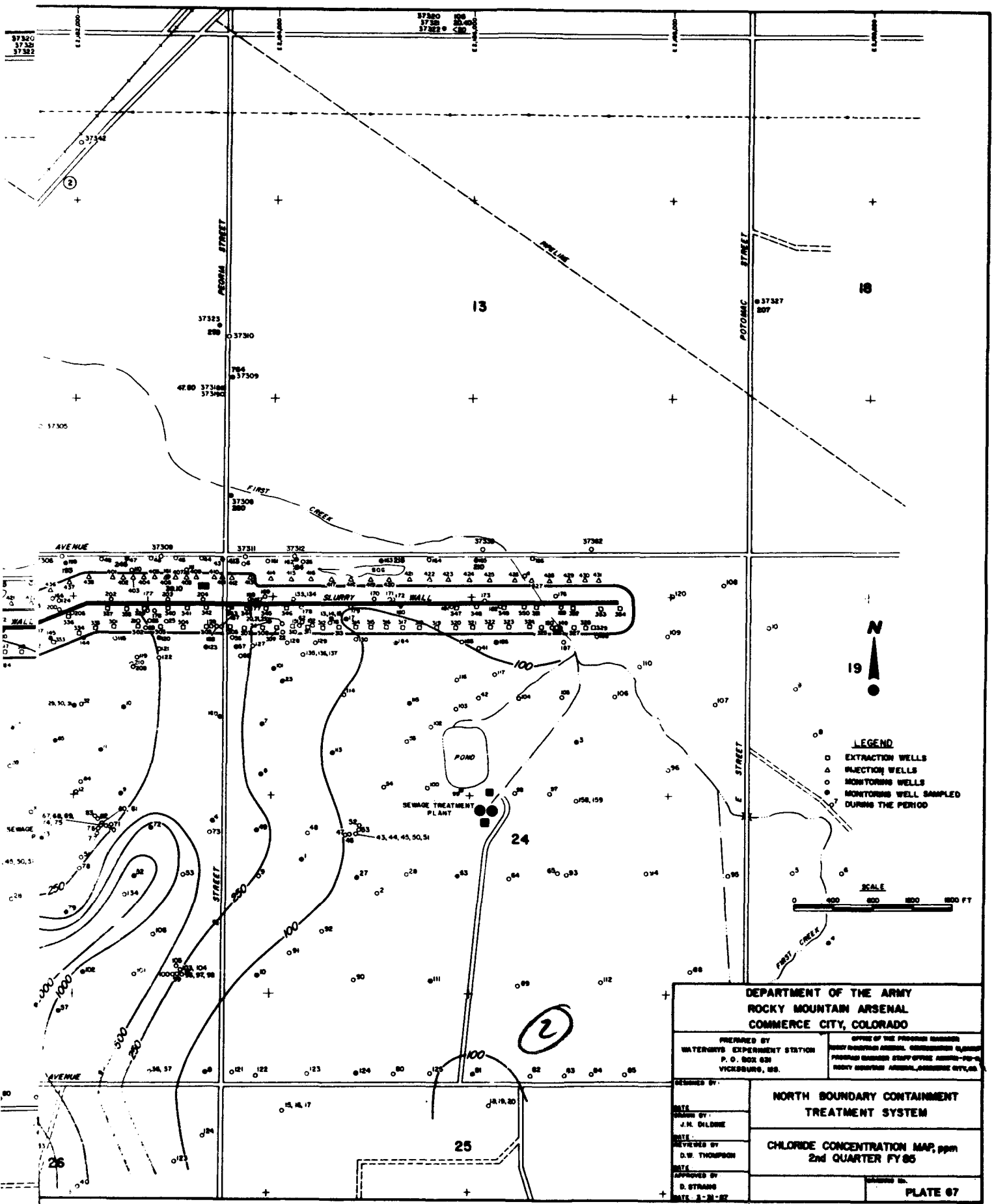

EAST 104TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
D STREET
EAST 96TH AVENUE
9TH AVENUE
SLURRY
RESERVOIR F
15
22
23
26
27
14
6
2
1
0.2
1.0

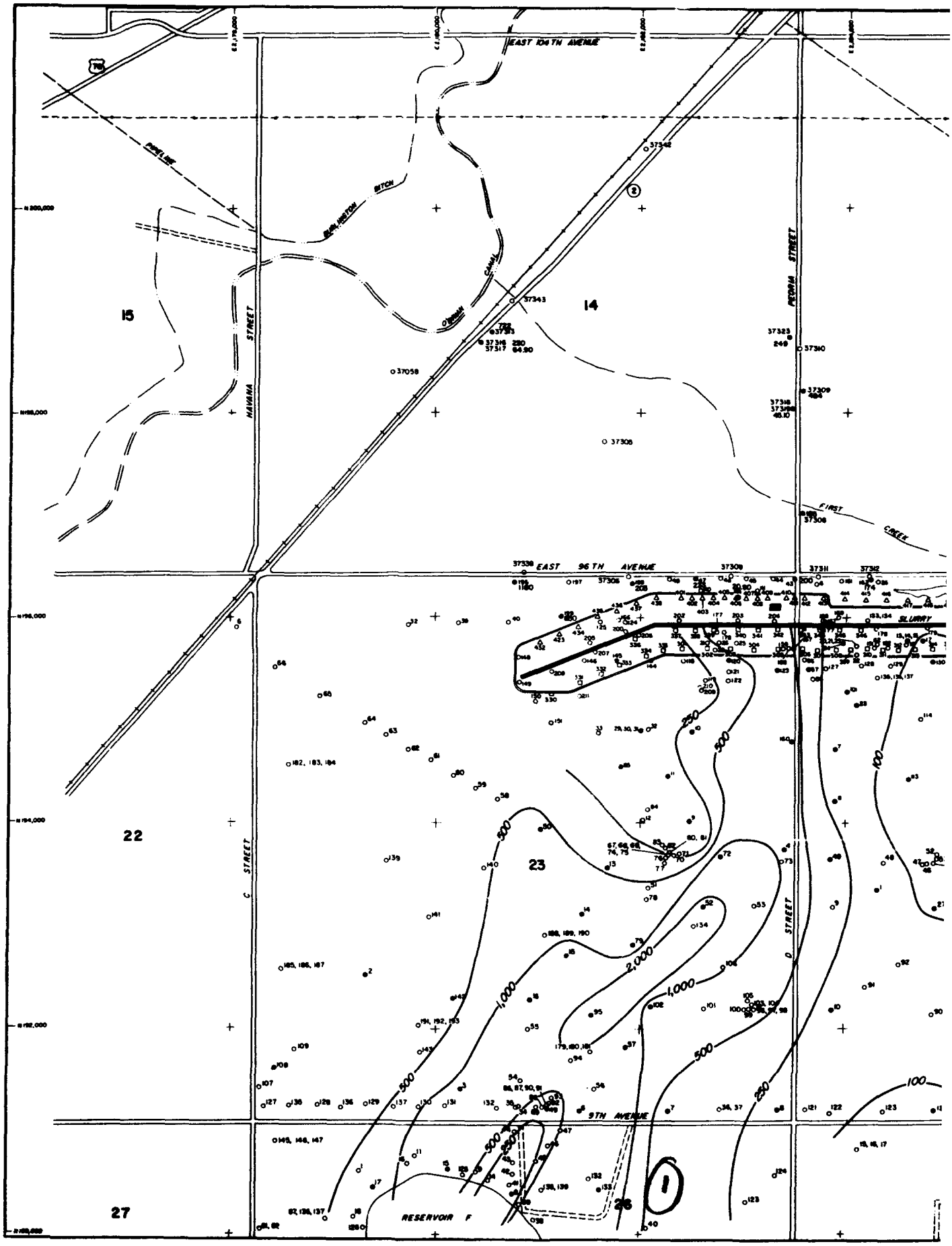

PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
0.2
1.0
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
J.H. DILBONE
D.W. THOMPSON
D. STRAUB
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
DIELDRIN CONCENTRATION MAP, ppb
4th QUARTER FY 86
PLATE 65

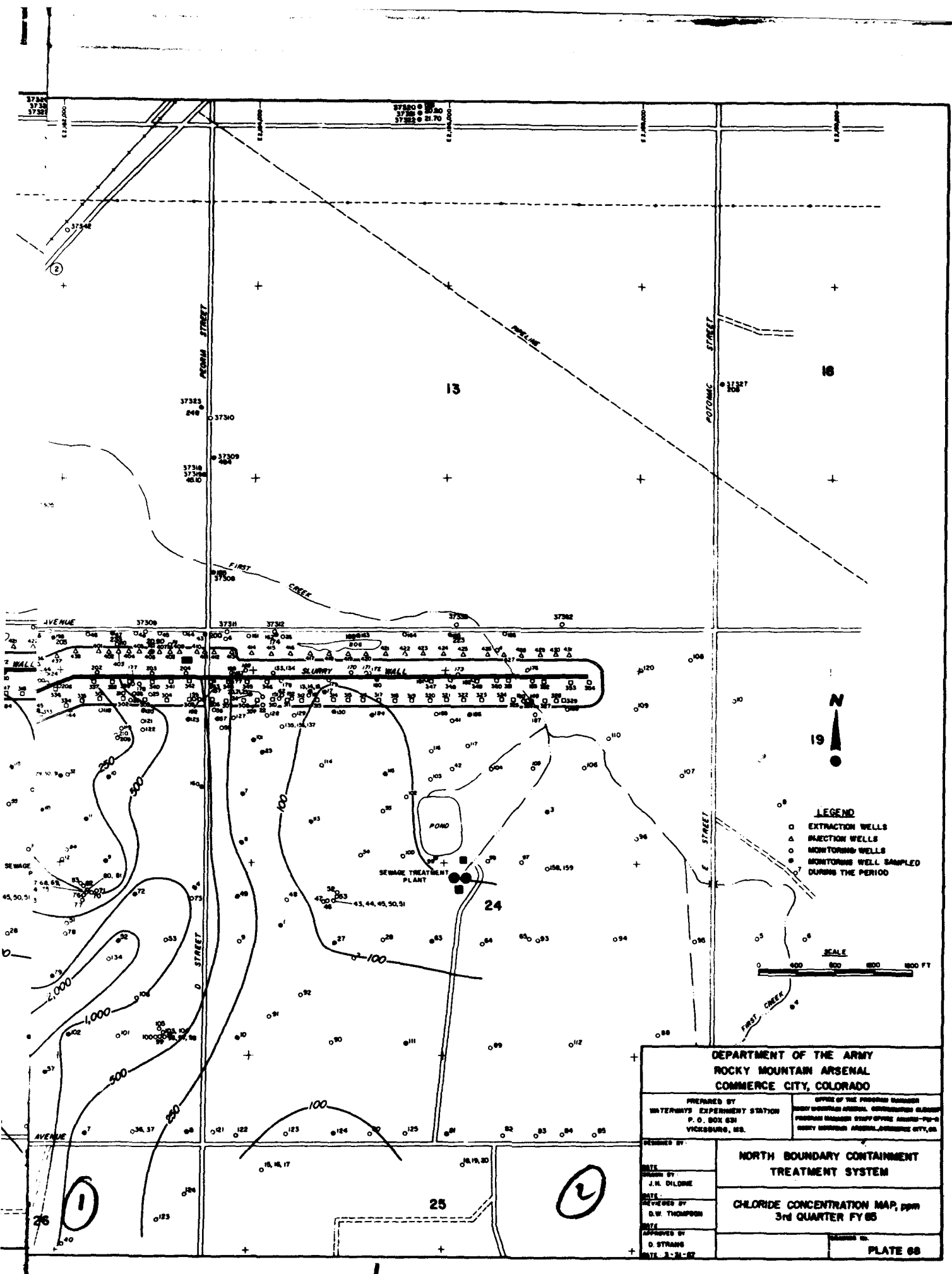

EAST 104TH AVENUE
STATE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
C STREET
D STREET
SLURRY
RESERVOIR F
15
14
22
23
27
26
1
500
250
2,000
1,000
100

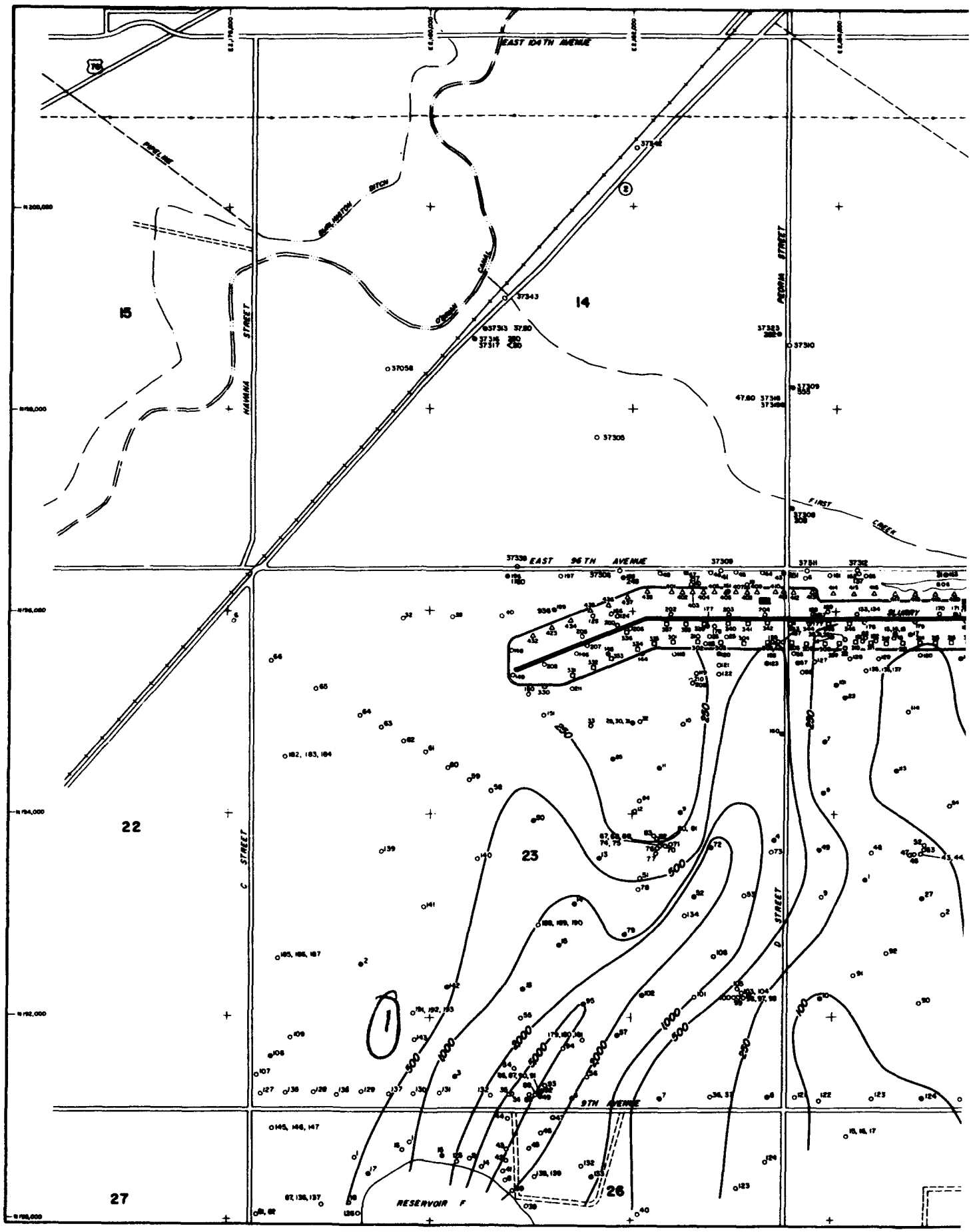

PEORIA STREET
POTOMAC STREET
E STREET
D STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1200 1600 FT
100
250
500
1,000
2,000
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ATTN: AMXRM-PM-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
DESIGNED BY
DATE
DRAWN BY
J.M. DILDINE
DATE
REVIEWED BY
D W THOMPSON
DATE
APPROVED BY
D STRAUB
DATE 3-31-87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
CHLORIDE CONCENTRATION MAP, ppm
QUARTER FY85
DRAWING NO.
PLATE 66

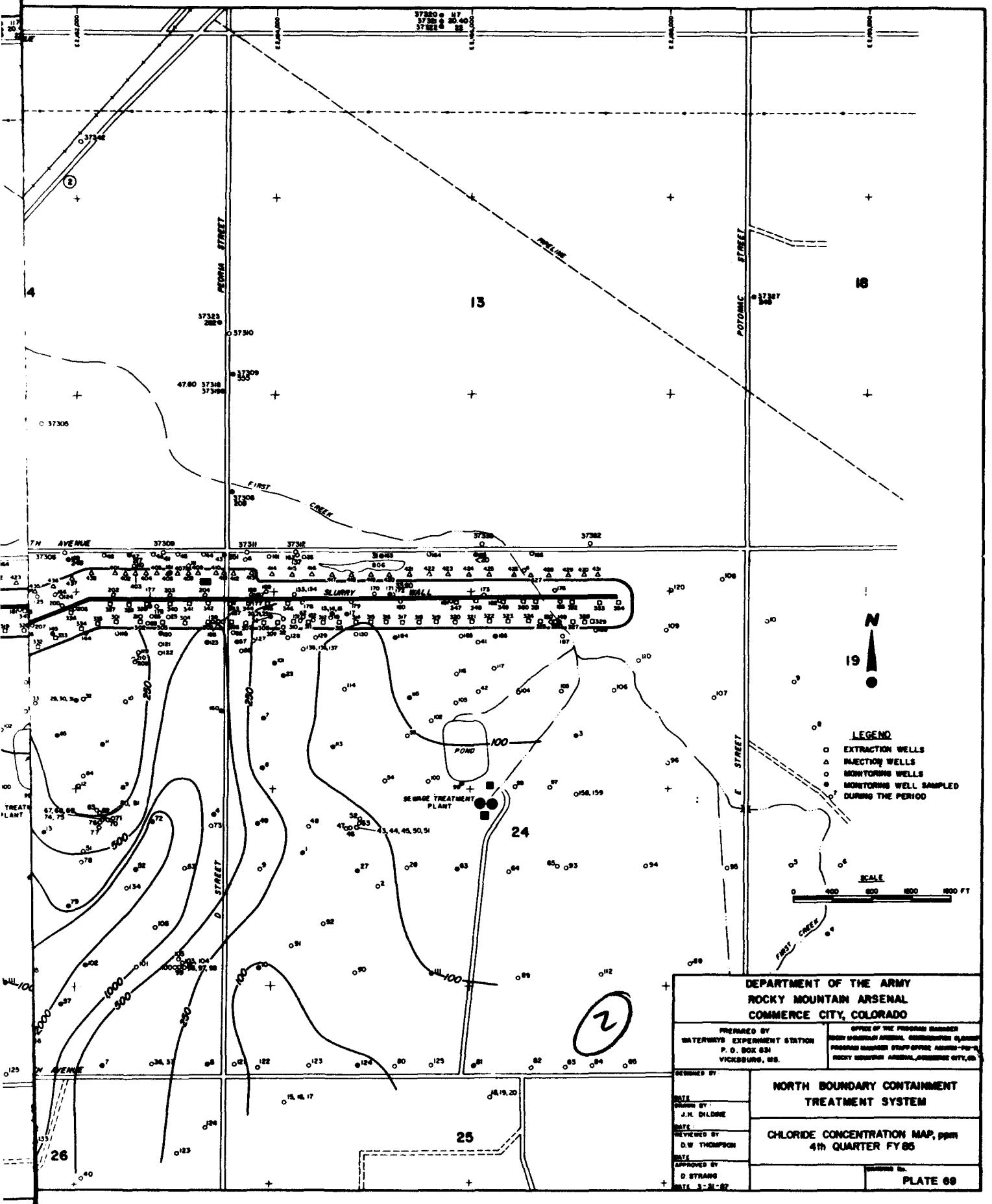

EAST 104TH AVENUE
PARK LINE
BURLINGTON DITCH
CANAL
HAVANA STREET
PEORIA STREET
15
14
37342
37343
37315
37346
37317
37058
37323
37340
37309
37305
FIRST CREEK
37339
EAST 96TH AVENUE
37308
37342
SLURRY
22
23
C STREET
250
500
1000
5000
2000
100
9TH AVENUE
27
RESERVOIR F
26

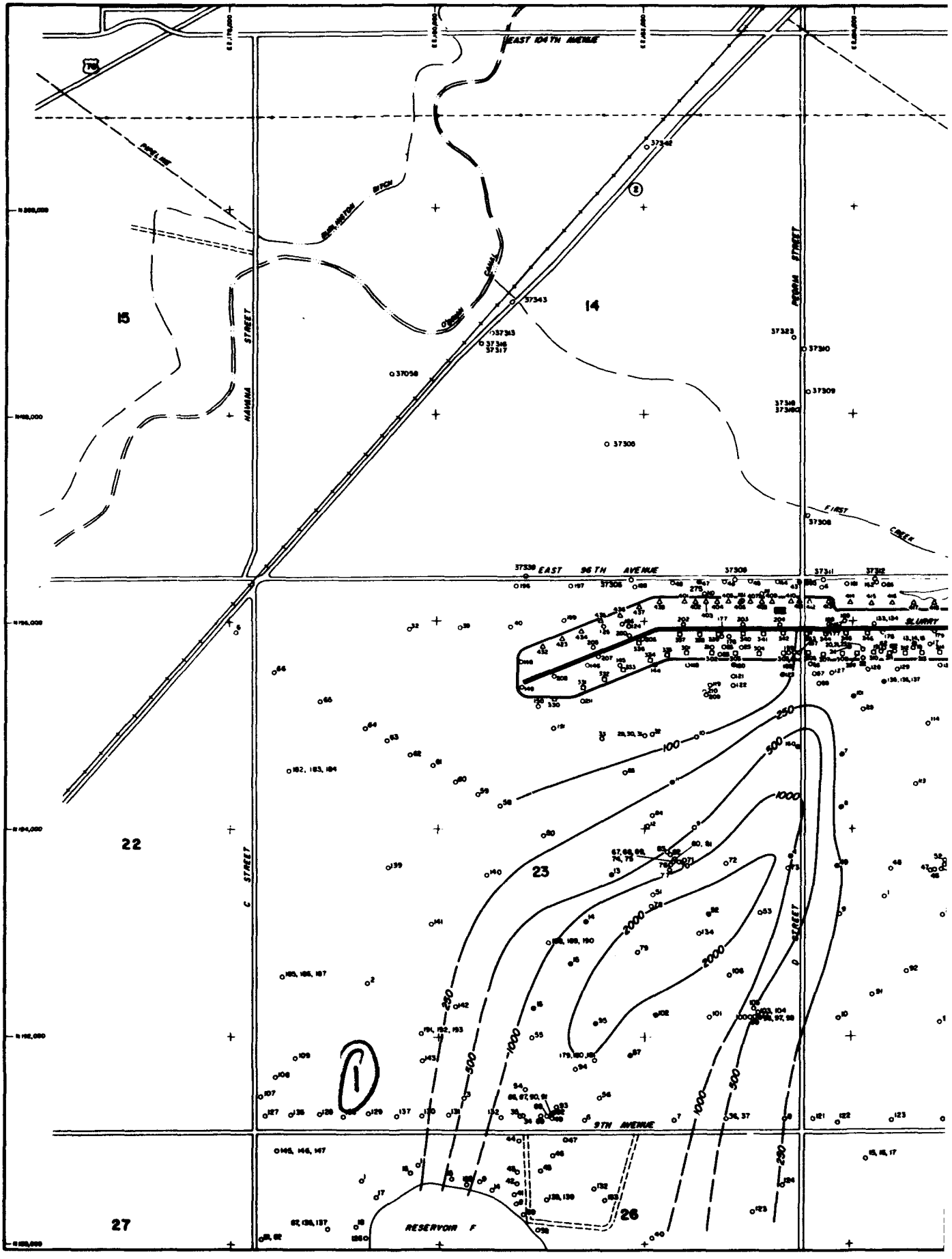

PEORIA STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
AVENUE
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1600 FT
100
250
500
1000
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY
J.H. DILDINE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
D. STRAINS
DATE 3-31-87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
CHLORIDE CONCENTRATION MAP, ppm
2nd QUARTER FY 85
PLATE 67

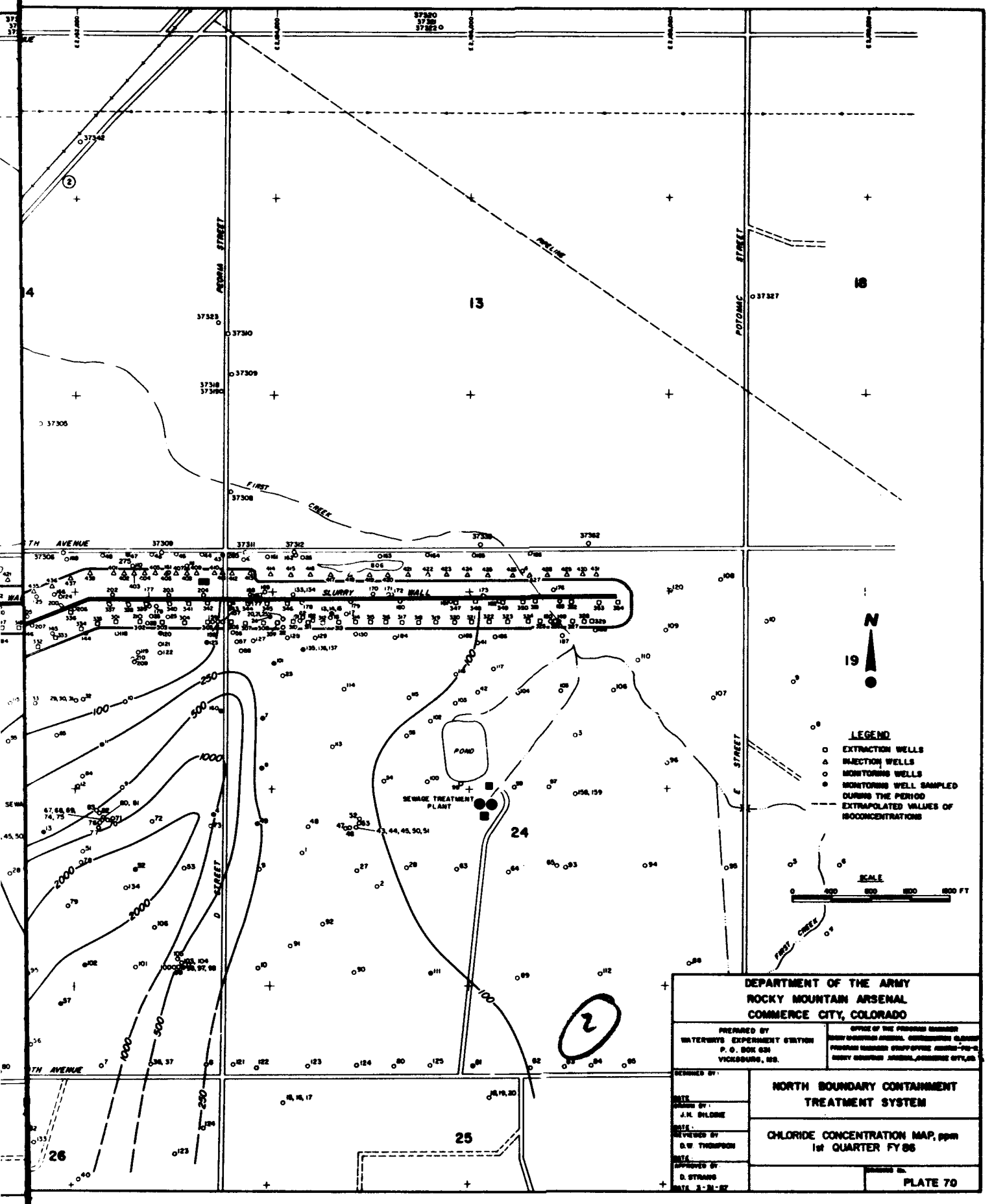

EAST 104TH AVENUE
PEORIA STREET
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
EAST 96TH AVENUE
FIRST CREEK
SLURRY
C STREET
D STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
37343
37342
37340
37309
37308
37306
37058
37338
37311
37312
250
500
1,000
2,000
100


PORTAL STREET
POTOMAC STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1200 1600 FT
N
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 631 VICKSBURG, MS.
DESIGNED BY
DRAWN BY J.H. DILORIE
REVIEWED BY D.W. THOMPSON
APPROVED BY D. STRANG DATE 3-24-87
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
CHLORIDE CONCENTRATION MAP, ppm
3rd QUARTER FY 85
PLATE 68


EAST 104TH AVENUE
EAST LINE
BRIGHTON DITCH
CANAL
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
C STREET
D STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
26
27
37343
37058
37305
37310
37309
37308
37338
37339
37392
37393
37394
37395
37396
37397
37398
37399
37400
37401
37402
37403
37404
37405
37406
37407
37408
37409
37410
37411
37412
37413
37414
37415
37416
37417
37418
37419
37420
37421
37422
37423
37424
37425
37426
37427
37428
37429
37430
37431


PEORIA STREET
POTOMAC STREET
E STREET
D STREET
PIPELINE
FIRST CREEK
7TH AVENUE
N AVENUE
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
4
37340
37309
37308
37306
37311
37312
37339
37382
37387
37323
37318
37319
47.60
806
250
500
1000
2000
100
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
SCALE
0 400 800 1600 2400 FT
N
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY
J.H. DILDINE
REVIEWED BY
D.W. THOMPSON
APPROVED BY
D. STRAUB
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
CHLORIDE CONCENTRATION MAP, ppm
4th QUARTER FY 85
PLATE 69


EAST 104TH AVENUE
PORTLAND
BURLINGTON DITCH
BURLINGTON CANAL
HAVANA STREET
PEORIA STREET
15
14
37343
37345
37346
37317
37058
37300
37323
37310
37309
37308
FIRST CREEK
EAST 96TH AVENUE
37339
37306
37311
37312
SLURRY
22
23
C STREET
D STREET
250
100
500
1000
2000
9TH AVENUE
27
26
RESERVOIR F



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

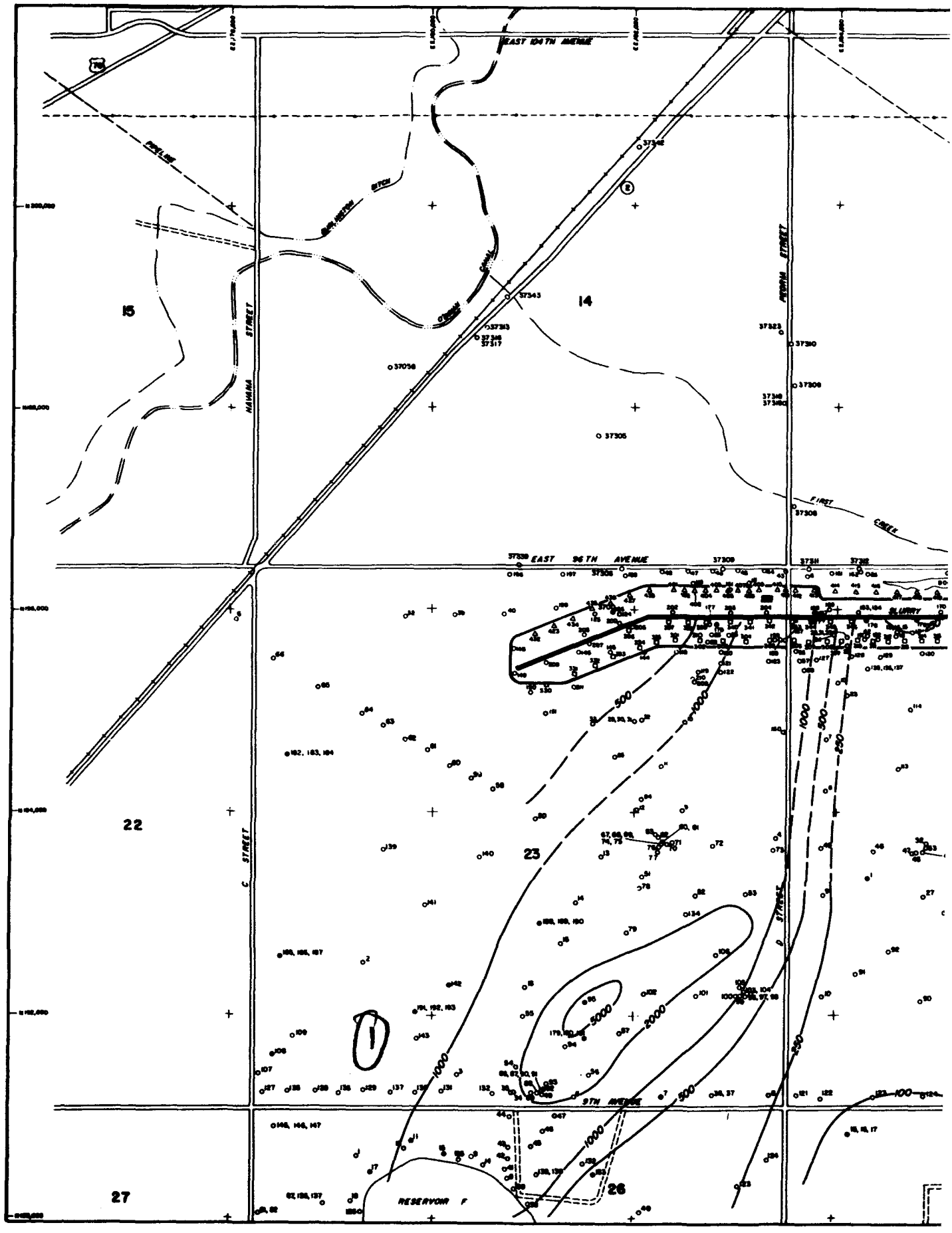
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

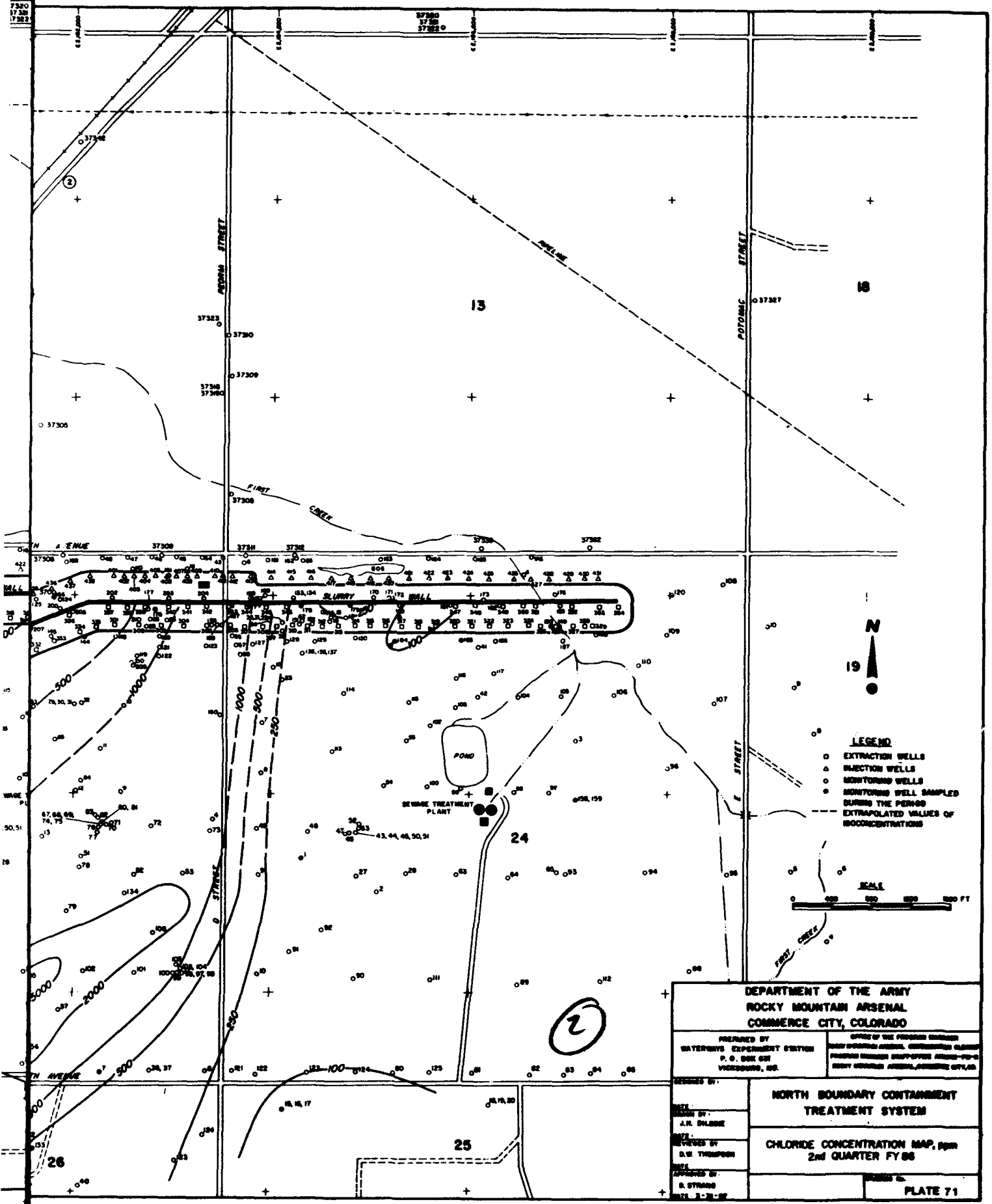
DESIGNED BY:
DRAWN BY: J.H. DILORIE
REVIEWED BY: D.W. THOMPSON
APPROVED BY: D. STRAUB

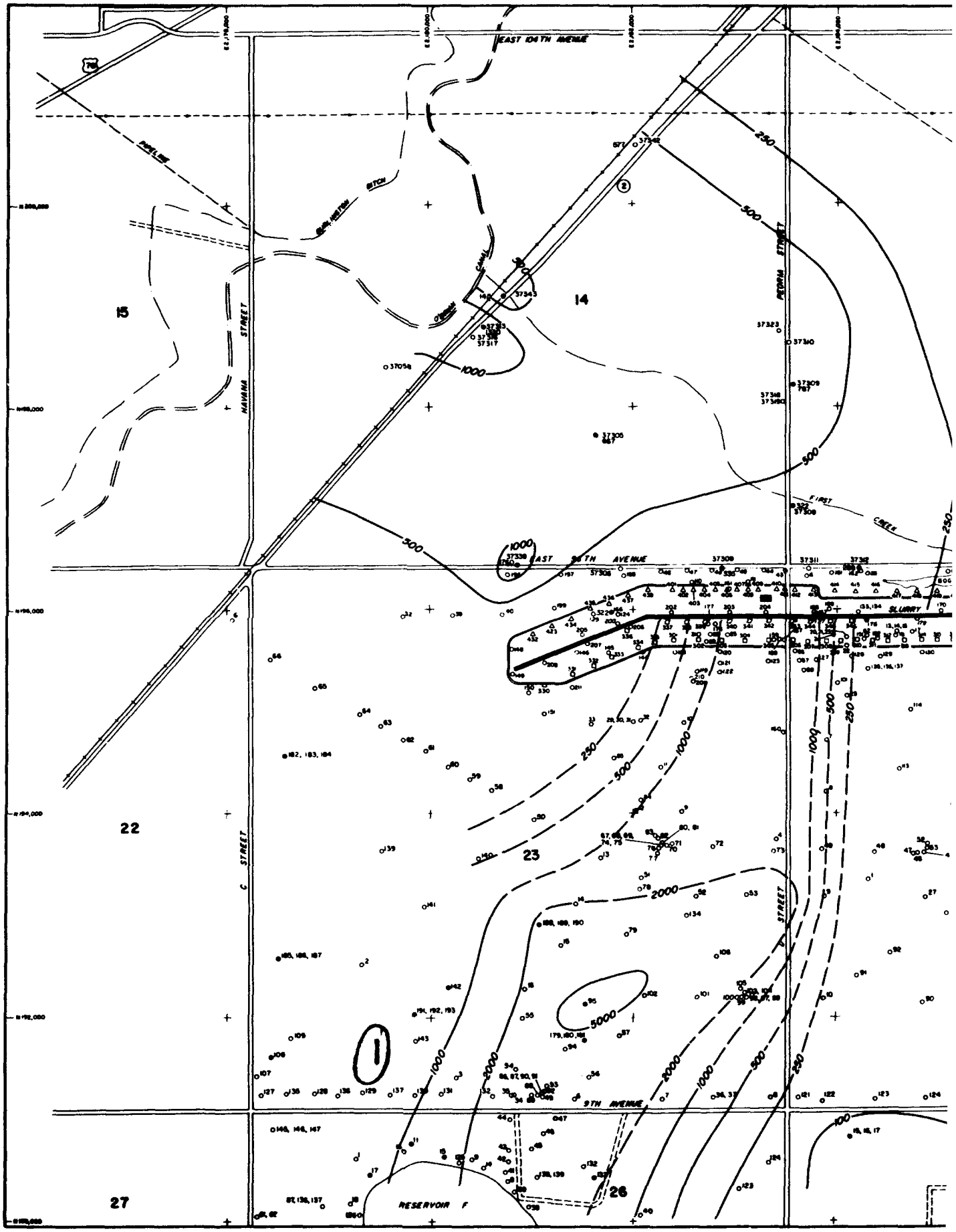
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

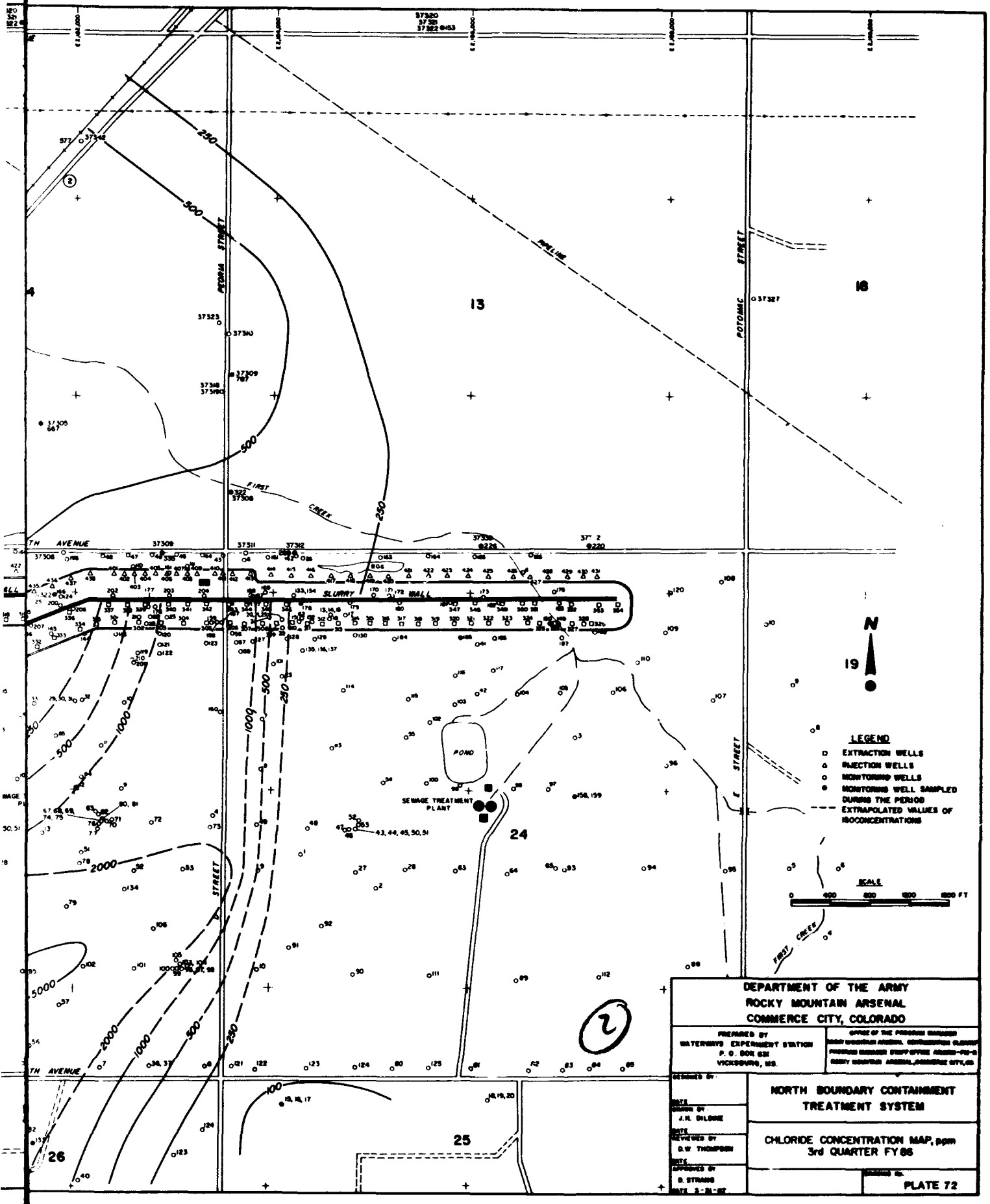
CHLORIDE CONCENTRATION MAP, ppm
1st QUARTER FY 86

DRAWING No. PLATE 70


EAST 104TH AVENUE
PECK DITCH
Canal
HAVANA STREET
PEORIA STREET
EAST 96TH AVENUE
FIRST CREEK
C STREET
D STREET
97TH AVENUE
RESERVOIR F
15
14
22
23
27
26
1
37338
37343
37383
37316
37317
37056
37305
37323
37390
37309
37306
37339
37308
37382
500
1000
2000
5000
250
100


PEORIA STREET
POTOMAC STREET
E STREET
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
DESIGNED BY
DRAWN BY
J.R. DALBEE
REVIEWED BY
R.W. THOMPSON
APPROVED BY
R. STRAUB
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
CHLORIDE CONCENTRATION MAP, ppm
2nd QUARTER FY 86
PLATE 71


EAST 104TH AVENUE
PORT LINE
SAND CREEK DITCH
HAVANA STREET
PEORIA STREET
O'BRIAN CANAL
FIRST CREEK
EAST 96TH AVENUE
SLURRY
C STREET
D STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
27
26
1
2
250
500
1000
2000
5000



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, HEADQUARTERS CLARIDEN
PROGRAM MANAGER STAFF OFFICE ARMCO-PMO-E
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY

DATE

DRAWN BY
J.R. GILBERT

DATE

REVIEWED BY
D.W. THOMPSON

DATE

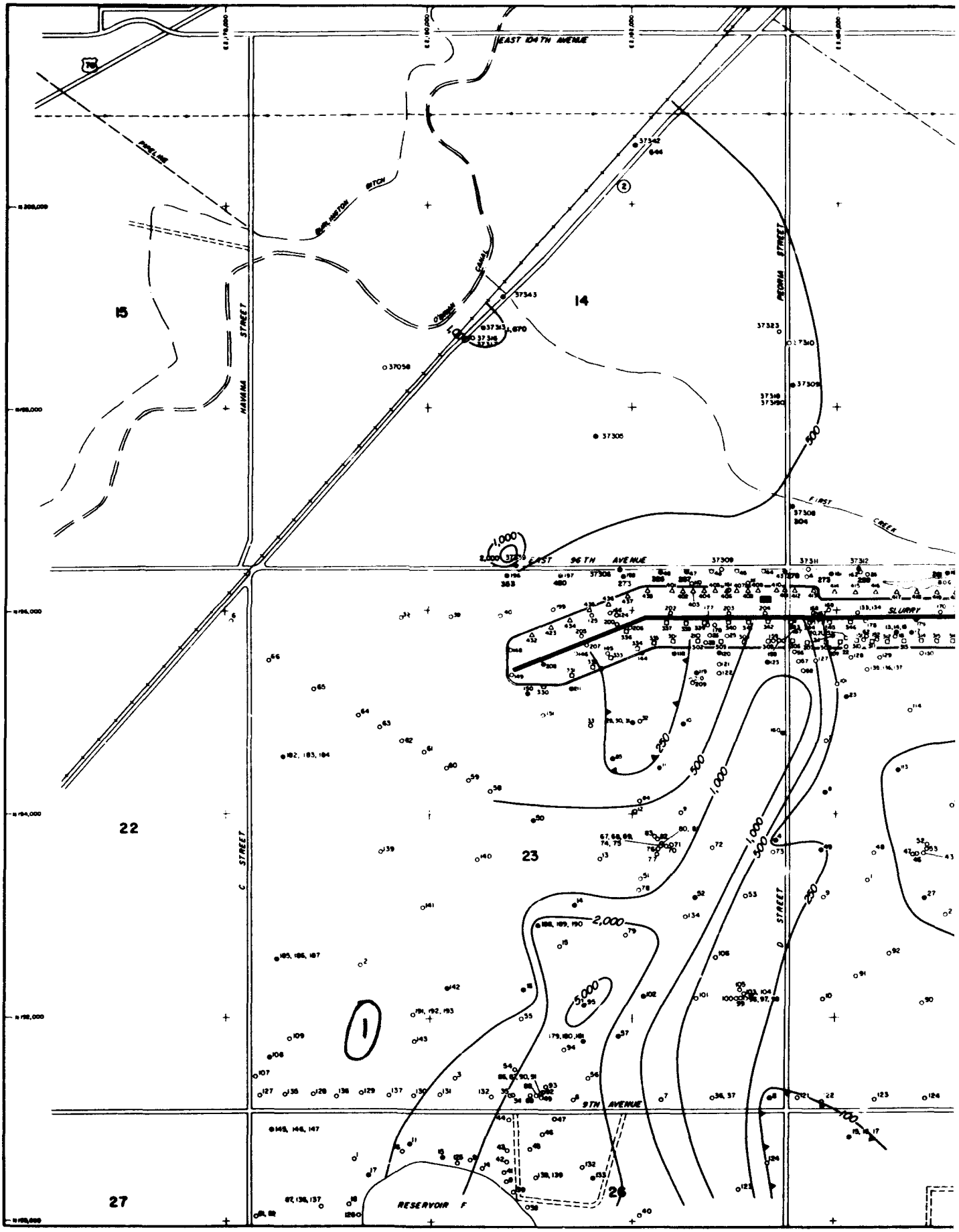
APPROVED BY
D. STRAUB

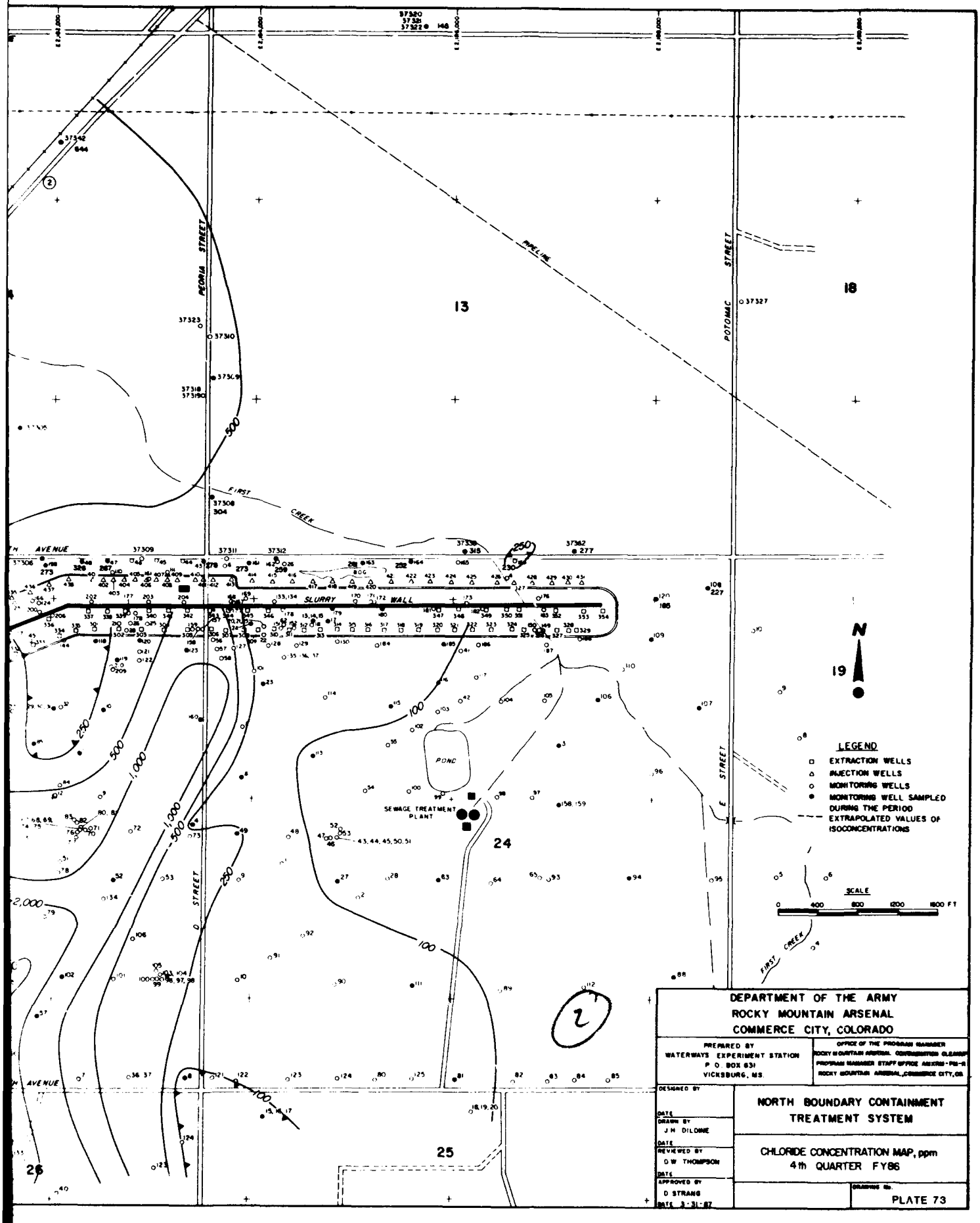
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

CHLORIDE CONCENTRATION MAP, ppm
3rd QUARTER FY86

DRAWING NO.
PLATE 72


EAST 104TH AVENUE
PIPELINE
DITCH
CANAL
HAVANA STREET
PEORIA STREET
FIRST CREEK
EAST 96TH AVENUE
SLURRY
C STREET
D STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
27
26
1
37342
37343
37323
37340
37309
37058
37306
37308
37310
37312
1,000
500
250
2,000
5,000
100



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

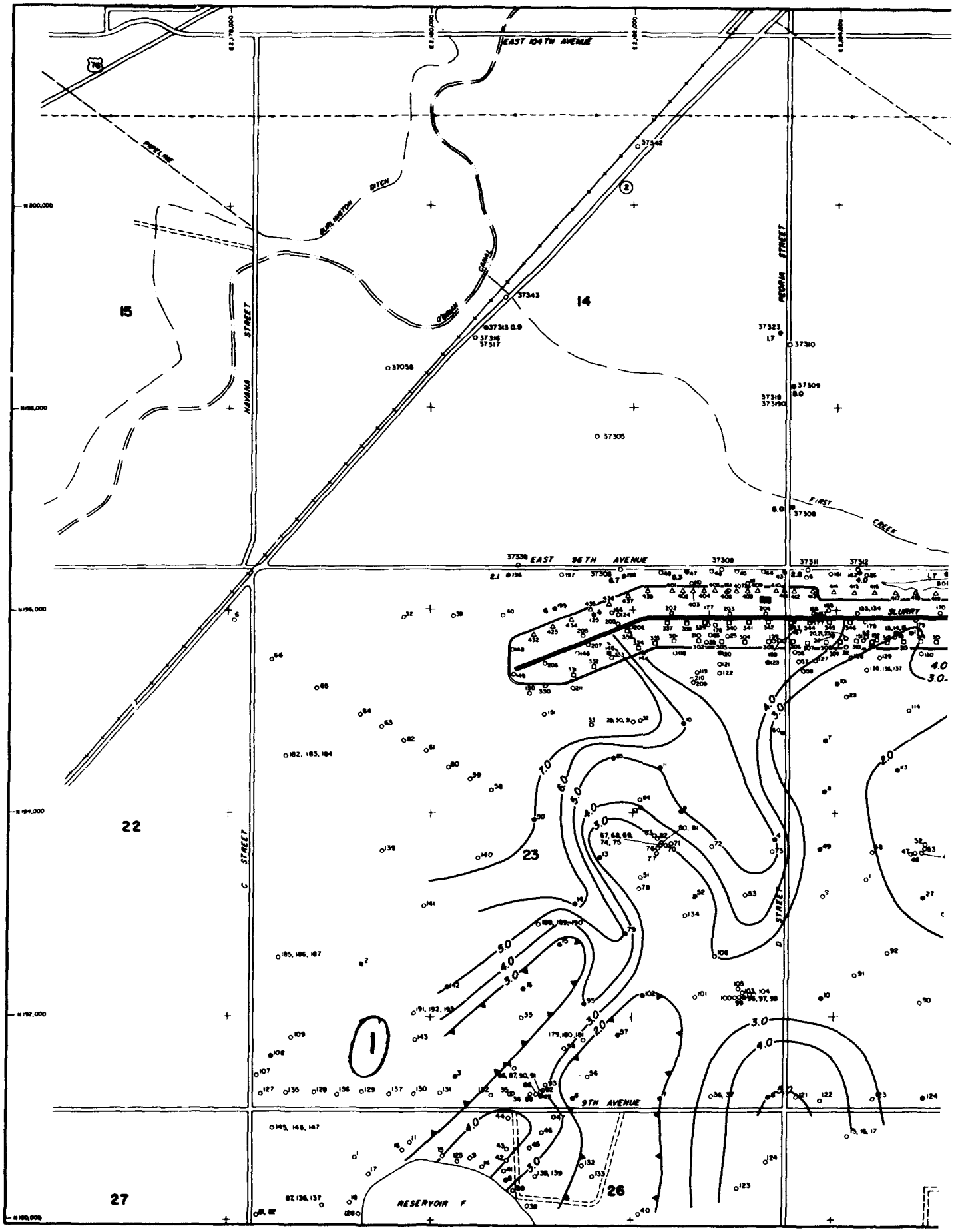
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATED CLEANUP
PROGRAM MANAGER STAFF OFFICE ARMCO-PMO-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

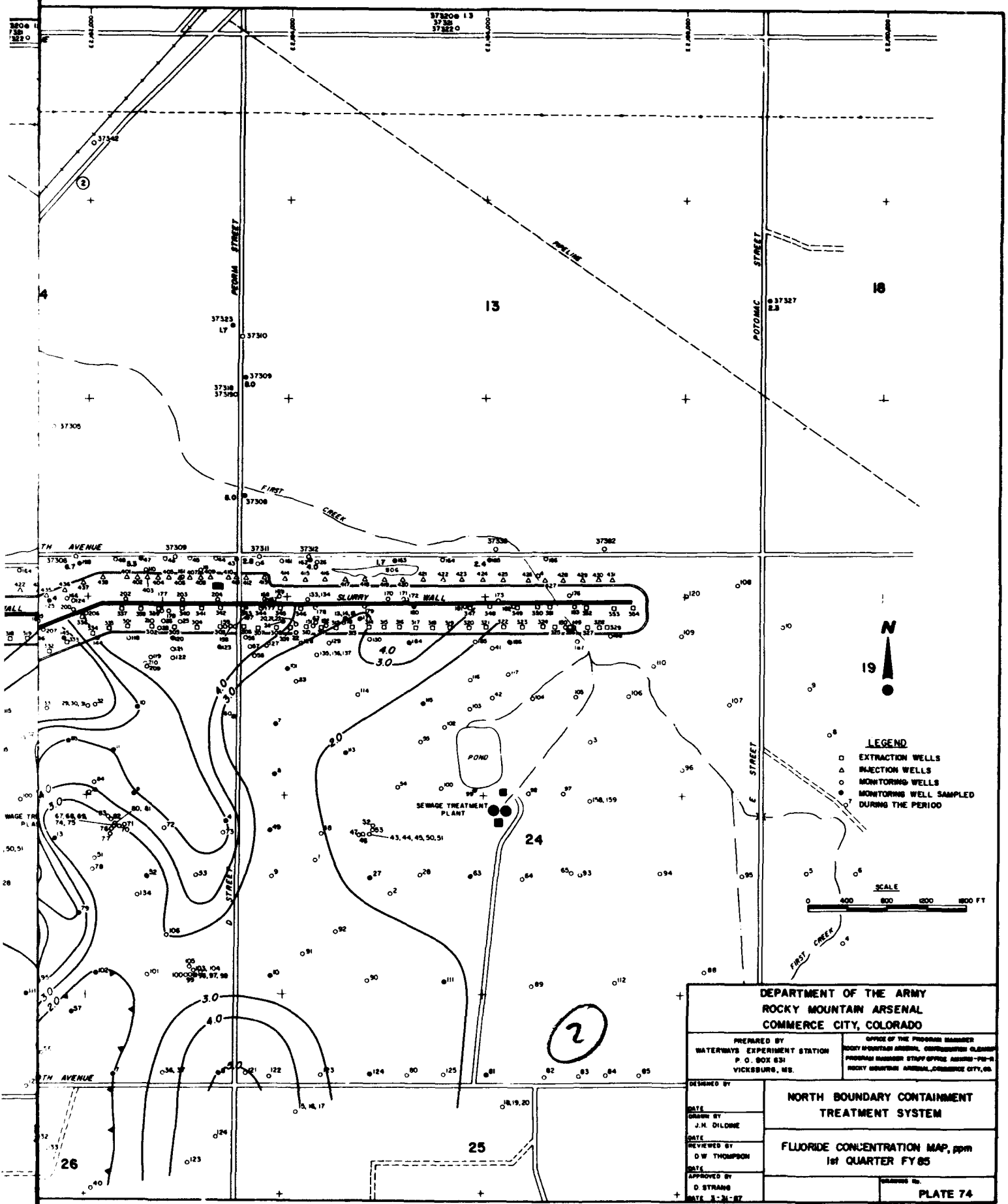
DESIGNED BY
DATE
DRAWN BY J H DILORNE
DATE
REVIEWED BY D W THOMPSON
DATE
APPROVED BY D STRANG
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

CHLORIDE CONCENTRATION MAP, ppm
4th QUARTER FY86

DRAWING No.
PLATE 73


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
HAVANA STREET
PEORIA STREET
C STREET
D STREET
PIPE LINE
BURLINGTON DITCH
CANAL
FIRST CREEK
RESERVOIR F
SLURRY
15
14
22
23
27
26
1
2
37343
37342
37340
37309
37308
37306
37305
37058
37338
37311
37312
37323
37316
37317
37318
37319
8.0
6.7
8.3
8.8
8.1
7.0
6.0
5.0
4.0
3.0
2.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

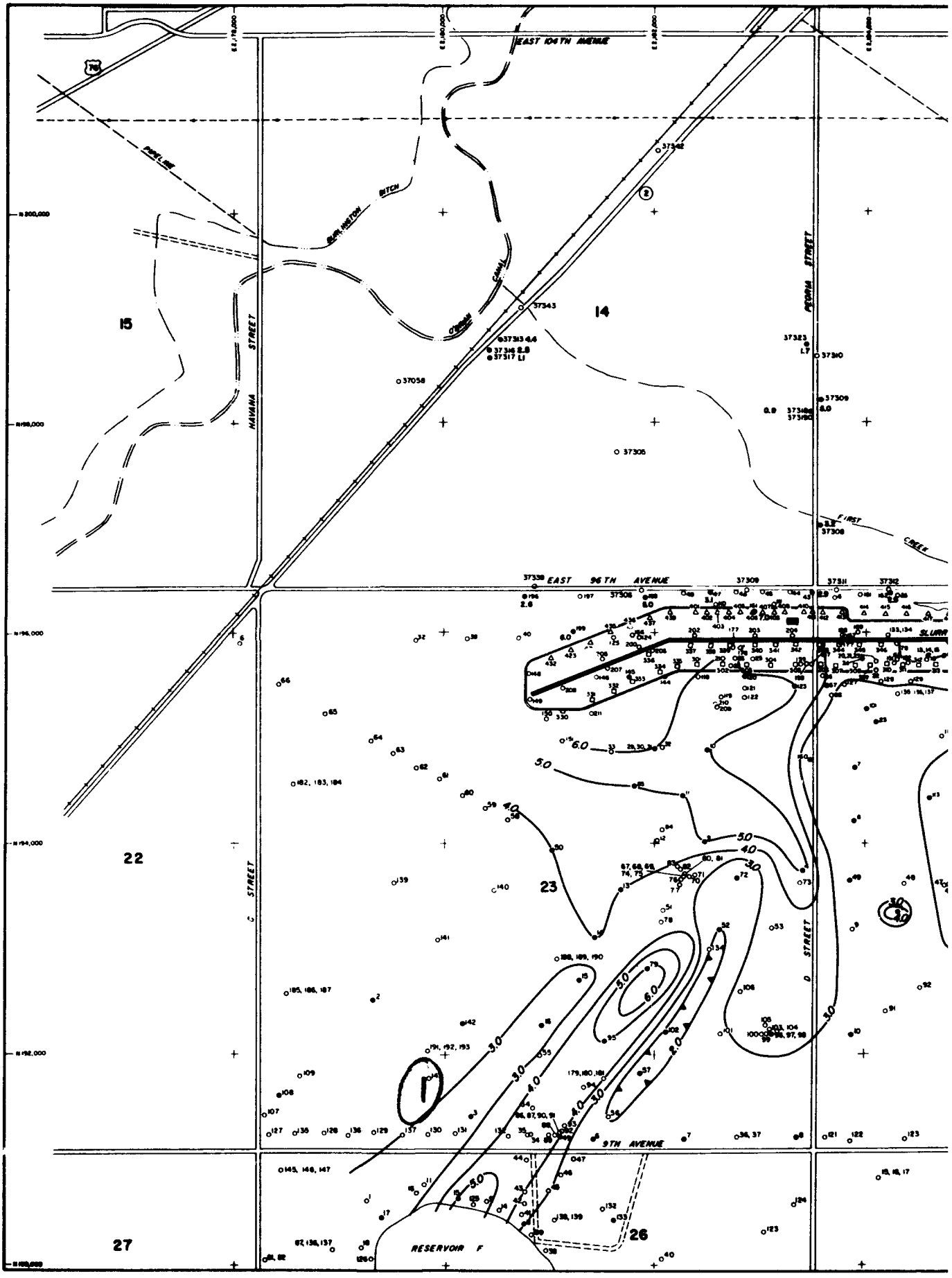
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ARSENAL-FED-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

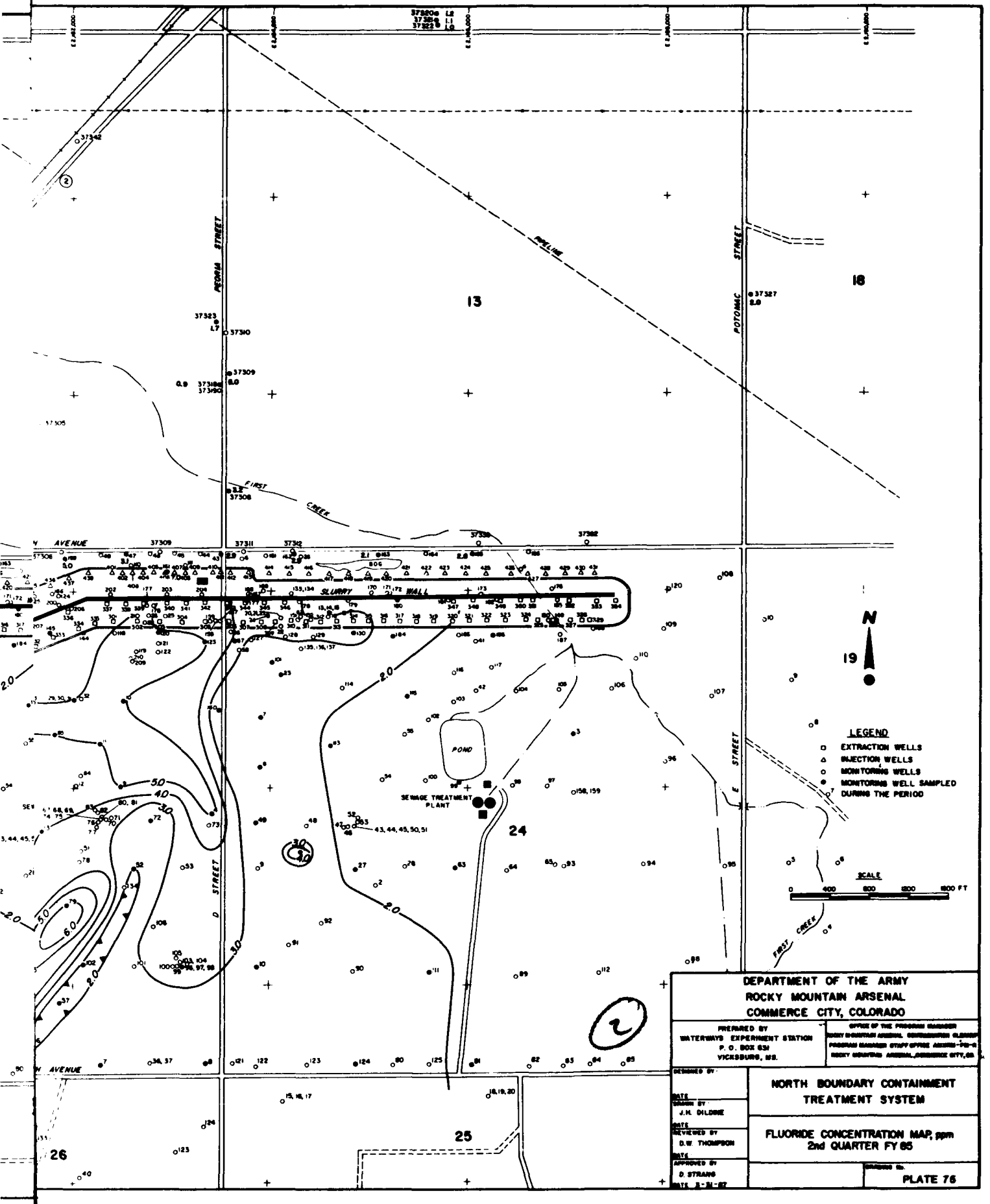
DESIGNED BY
DATE
DRAWN BY J.H. DILDINE
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY D. STRANG
DATE 3-24-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

FLUORIDE CONCENTRATION MAP, ppm
1st QUARTER FY 85

DRAWING No.
PLATE 74


EAST 104TH AVENUE
EAST 96TH AVENUE
9TH AVENUE
HAVANA STREET
PEORIA STREET
O STREET
FIRST CREEK
RESERVOIR F
15
14
22
23
26
27
37343
37058
37305
37308
37309
37310
37311
37312
37323
37338
37343
37346
37517
37383
6.0
5.0
4.0
3.0
2.0
1.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DRAWN BY J.H. DILDINE
DATE

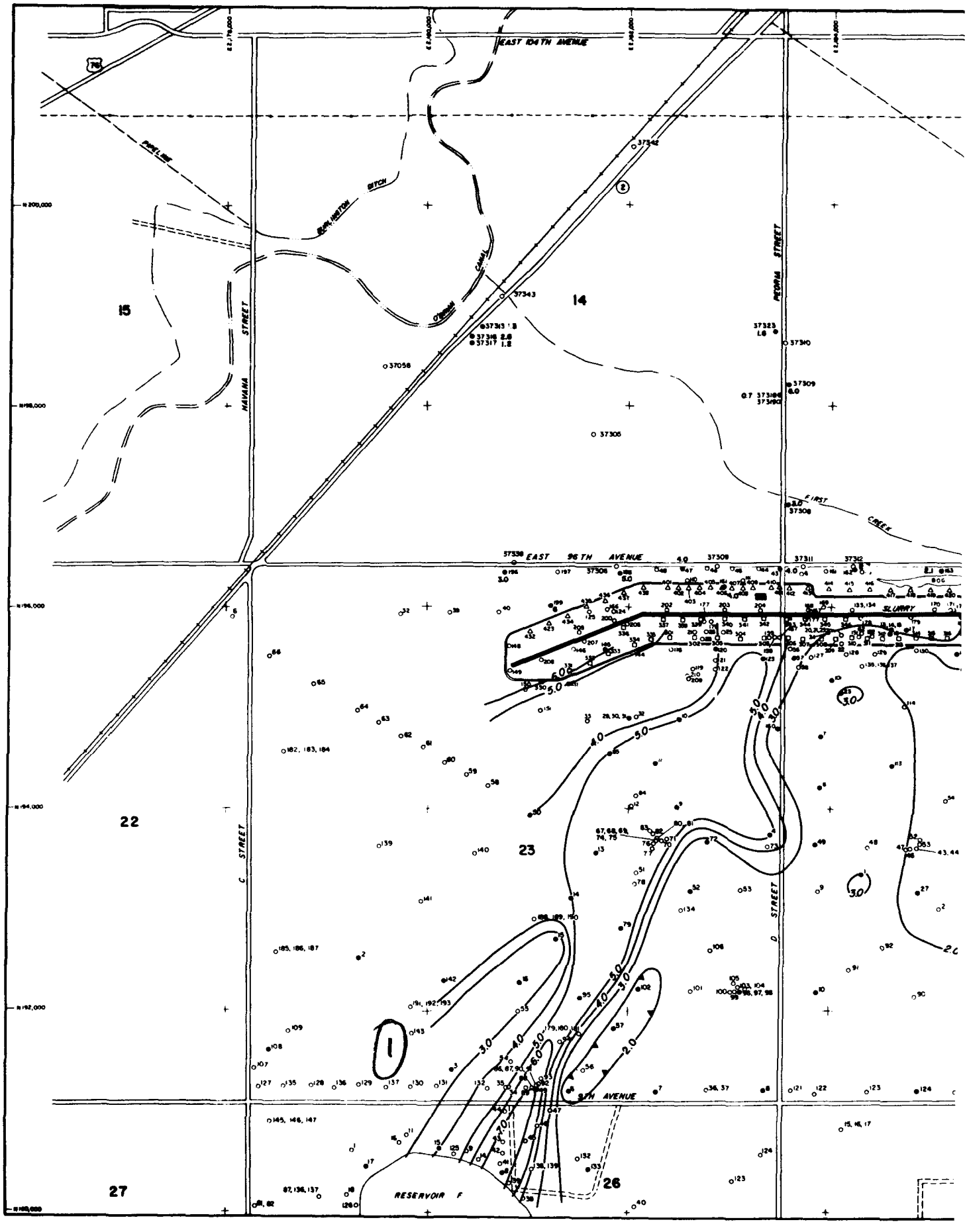
REVIEWED BY D.W. THOMPSON
DATE

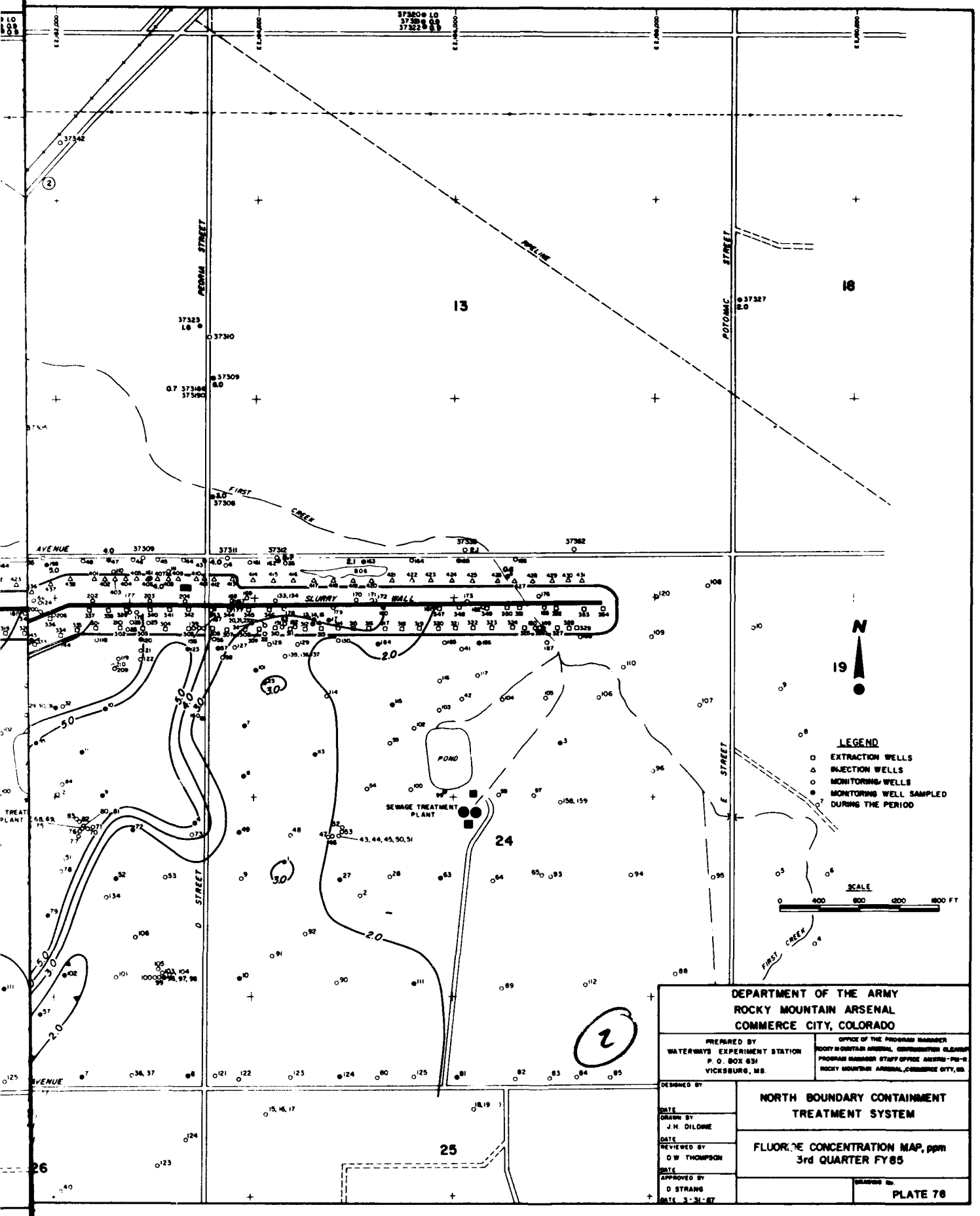
APPROVED BY D. STRANG
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

FLUORIDE CONCENTRATION MAP, ppm
2nd QUARTER FY 85

DRAWING NO. PLATE 76


EAST 104TH AVENUE
PARK LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
C STREET
D STREET
EAST 96TH AVENUE
FIRST CREEK
SLURRY
RESERVOIR F
15
14
22
23
26
27
37342
37343
37058
37305
37306
37308
37309
37310
37311
37312
37323
37336
N 200,000
N 198,000
N 196,000
N 194,000
N 192,000
E 2,178,000
E 2,180,000
E 2,182,000
E 2,184,000



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

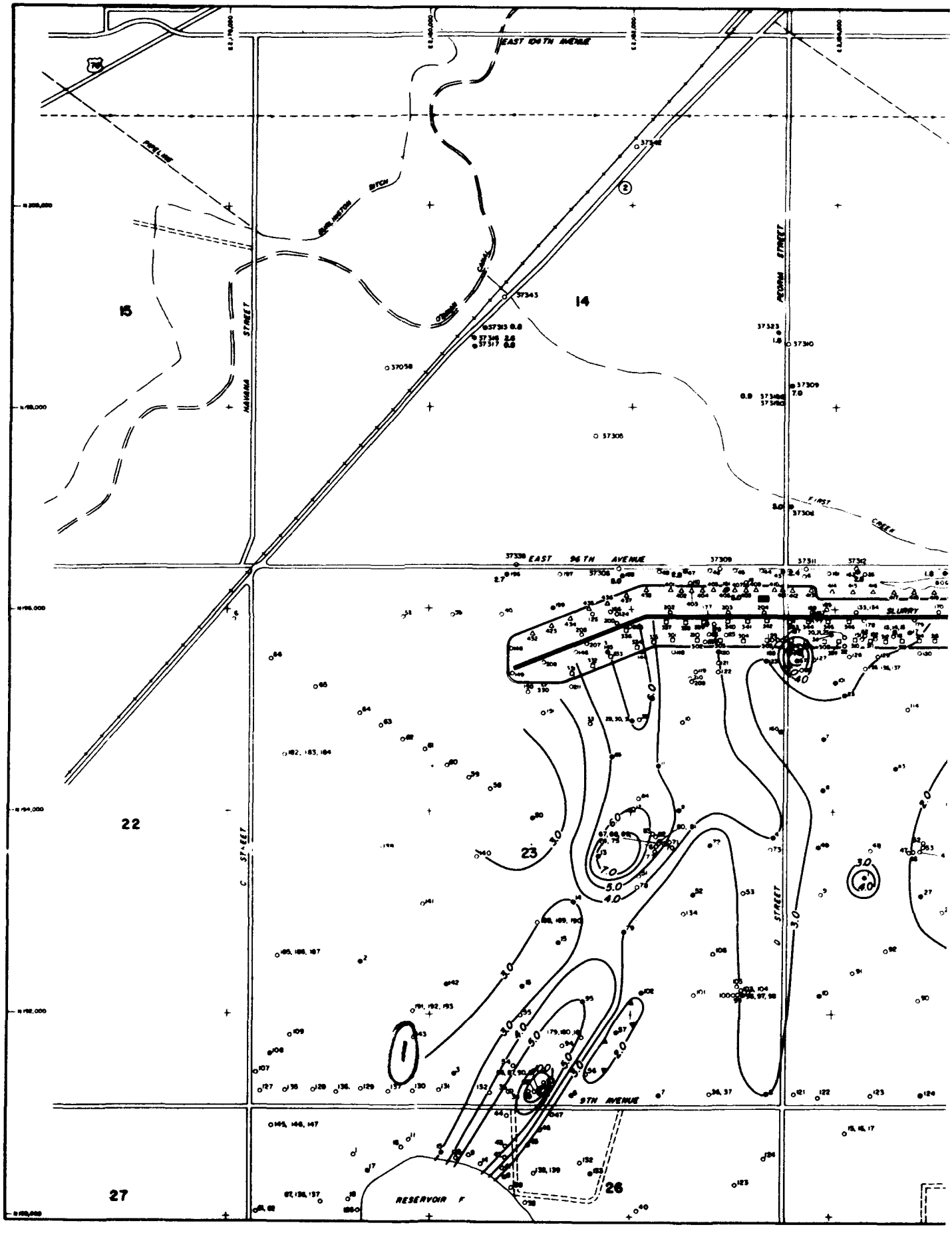
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE ARMRD-PM-R
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

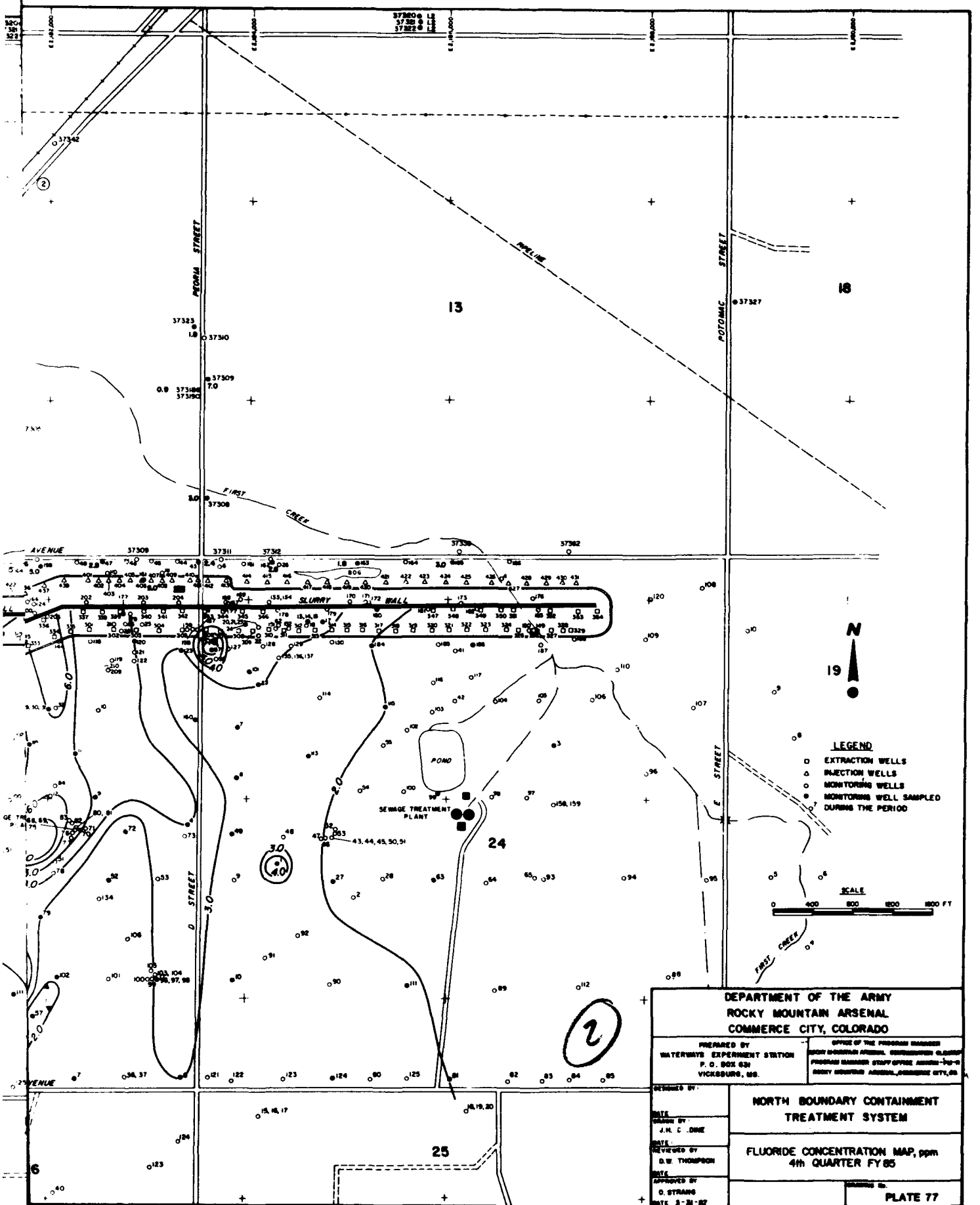
DESIGNED BY
DATE
DRAWN BY J.H. DILORIE
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY D STRANG
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

FLUORIDE CONCENTRATION MAP, ppm
3rd QUARTER FY85

DRAWING No.
PLATE 78


EAST 104TH AVENUE
PIPE LINE
SUMNER DITCH
SUMNER CANAL
HAVANA STREET
ADAMS STREET
EAST 96TH AVENUE
FIRST CREEK
SLURRY
C STREET
O STREET
9TH AVENUE
RESERVOIR F
15
14
22
23
27
26
1
2
3.0
4.0
5.0
6.0
7.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

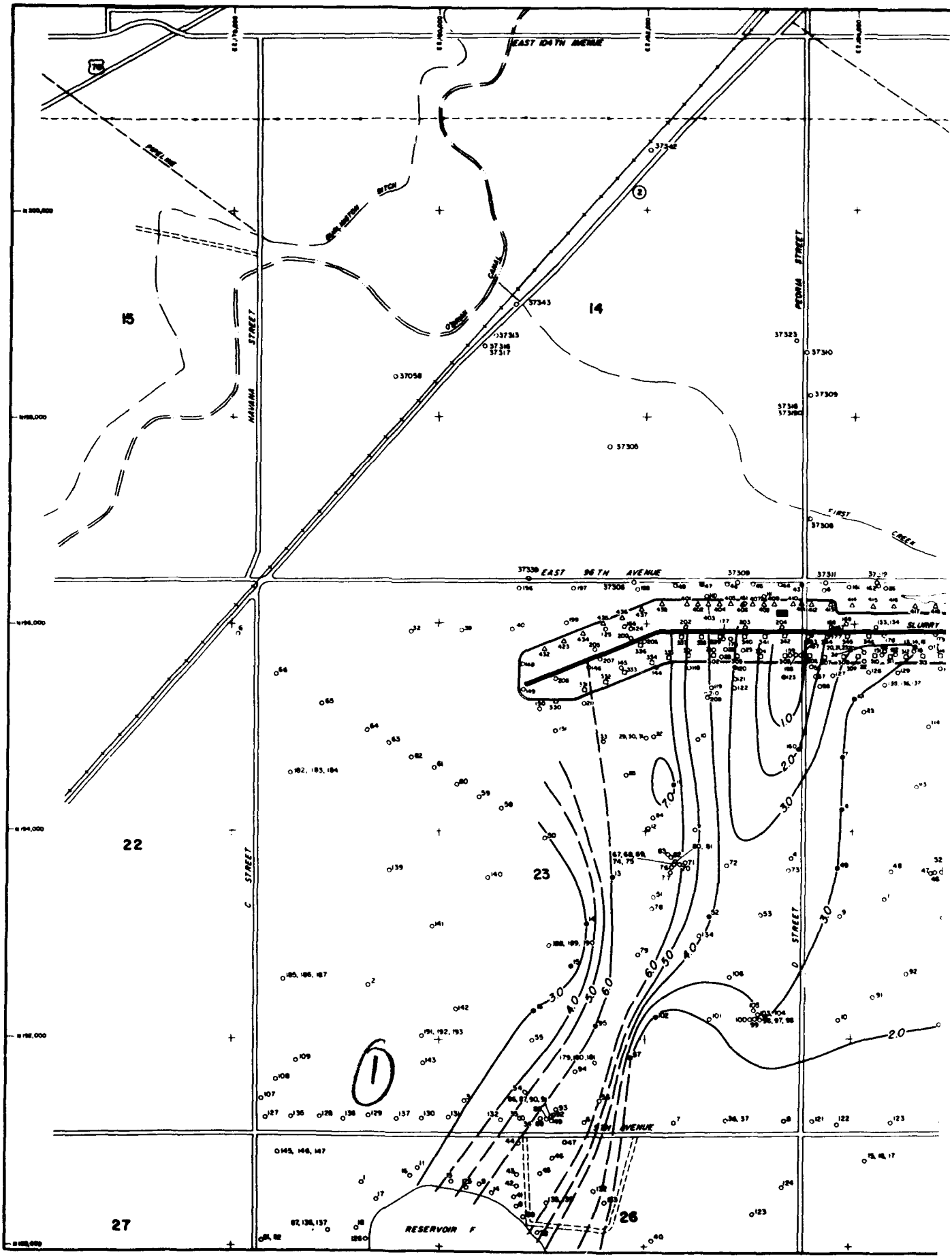
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

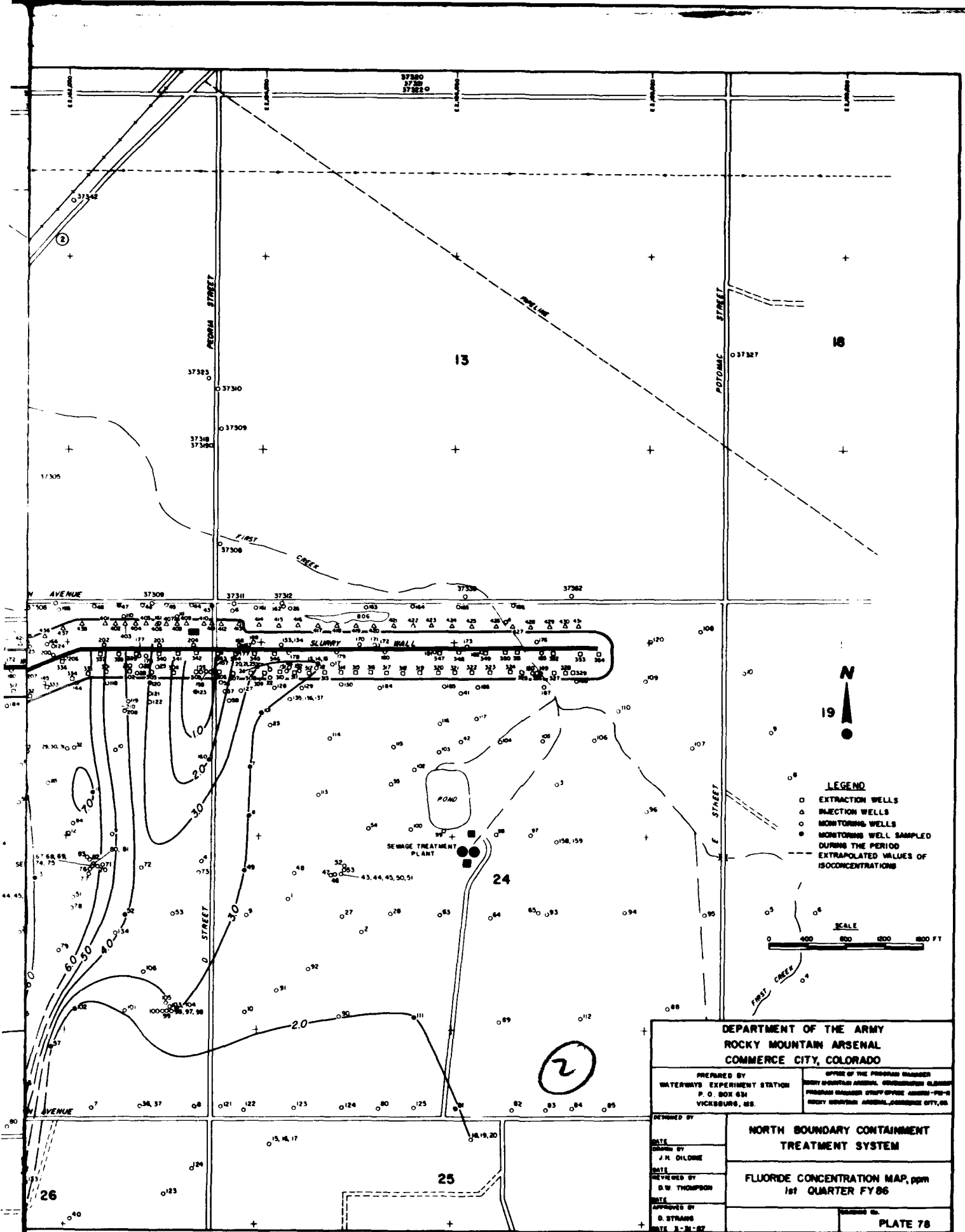
DESIGNED BY:
DATE
DRAWN BY: J.H. D. DINE
DATE
REVIEWED BY: D.W. THOMPSON
DATE
APPROVED BY: O. STRAUB
DATE 3-31-82

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

FLUORIDE CONCENTRATION MAP, ppm
4th QUARTER FY 85

DRAWING NO. PLATE 77


EAST 104TH AVENUE
PIPE LINE
SOUTH PLATTE RIVER
CANAL
HAVANA STREET
PEORIA STREET
15
14
37343
37342
37313
37346
37317
37058
37323
37340
37309
37348
37349
37306
FIRST CREEK
37308
EAST 96TH AVENUE
37339
37307
37311
SLURRY
22
23
C STREET
D STREET
96TH AVENUE
RESERVOIR F
27
26
1.0
2.0
3.0
4.0
5.0
6.0
7.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

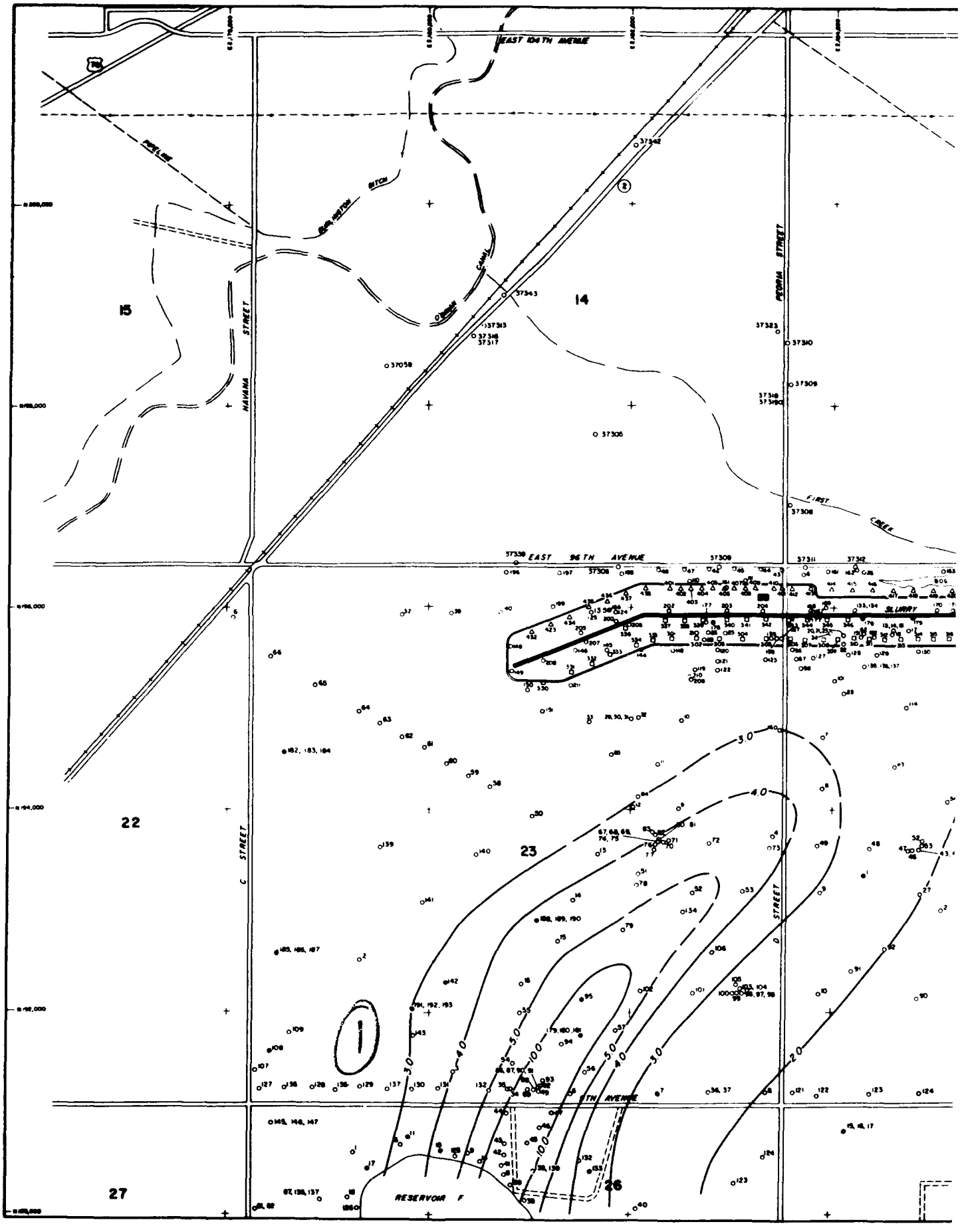
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE, ARMY-FBI-EPA
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

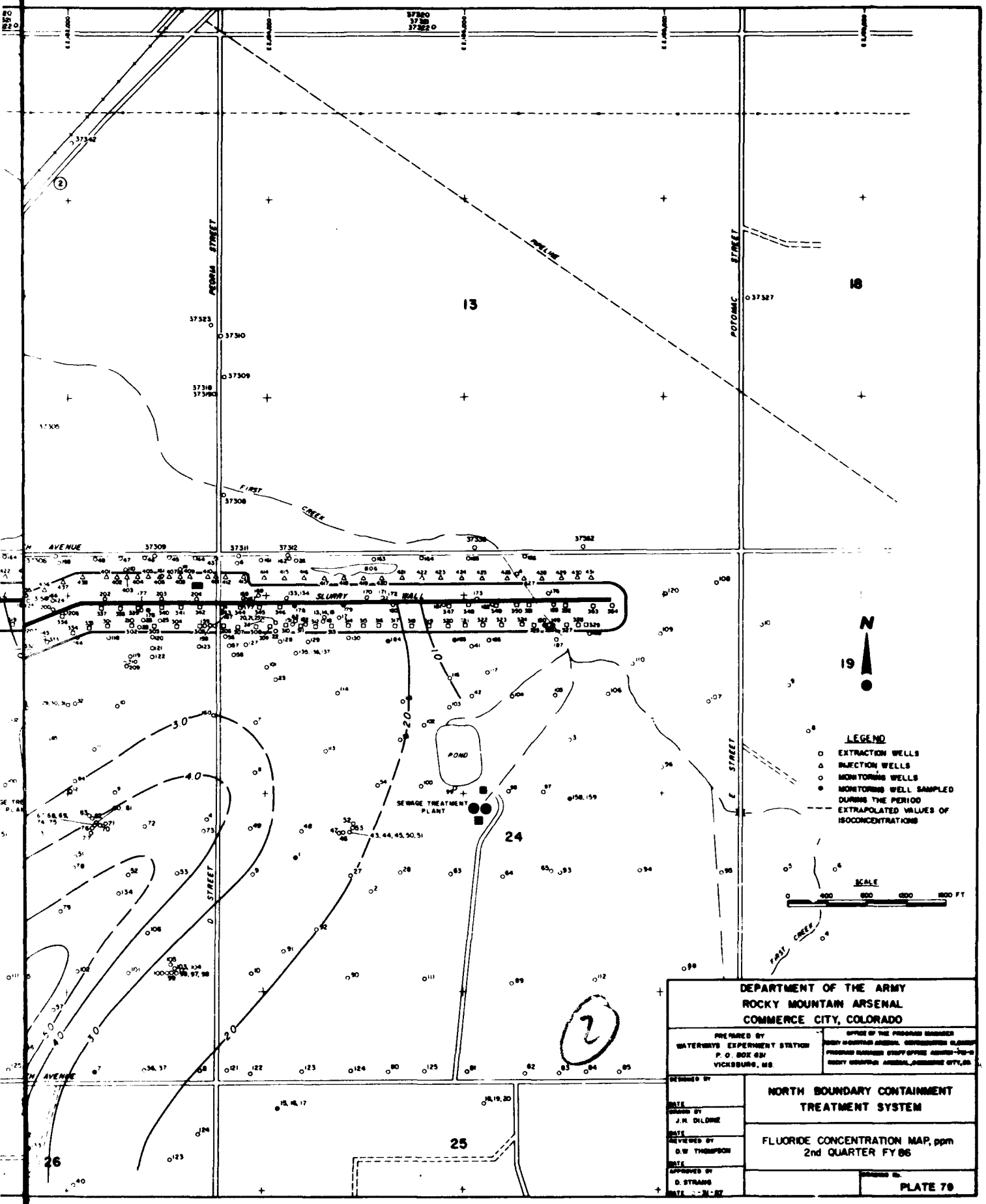
DESIGNED BY
DATE
DRAWN BY J.H. DILORIE
DATE
REVIEWED BY D.W. THOMPSON
DATE
APPROVED BY D. STRANG
DATE 8-31-87

NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

FLUORIDE CONCENTRATION MAP, ppm
1st QUARTER FY86

DRAWING NO.
PLATE 78


EAST 104TH AVENUE
PEORIA STREET
HAVANA STREET
C STREET
O STREET
EAST 96TH AVENUE
96TH AVENUE
FIRST CREEK
O'BRIAN CANAL
SLIPPY
RESERVOIR F
15
14
22
23
27
26
3.0
4.0
5.0
10.0



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

DESIGNED BY

DRAWN BY
J.R. DILORIE

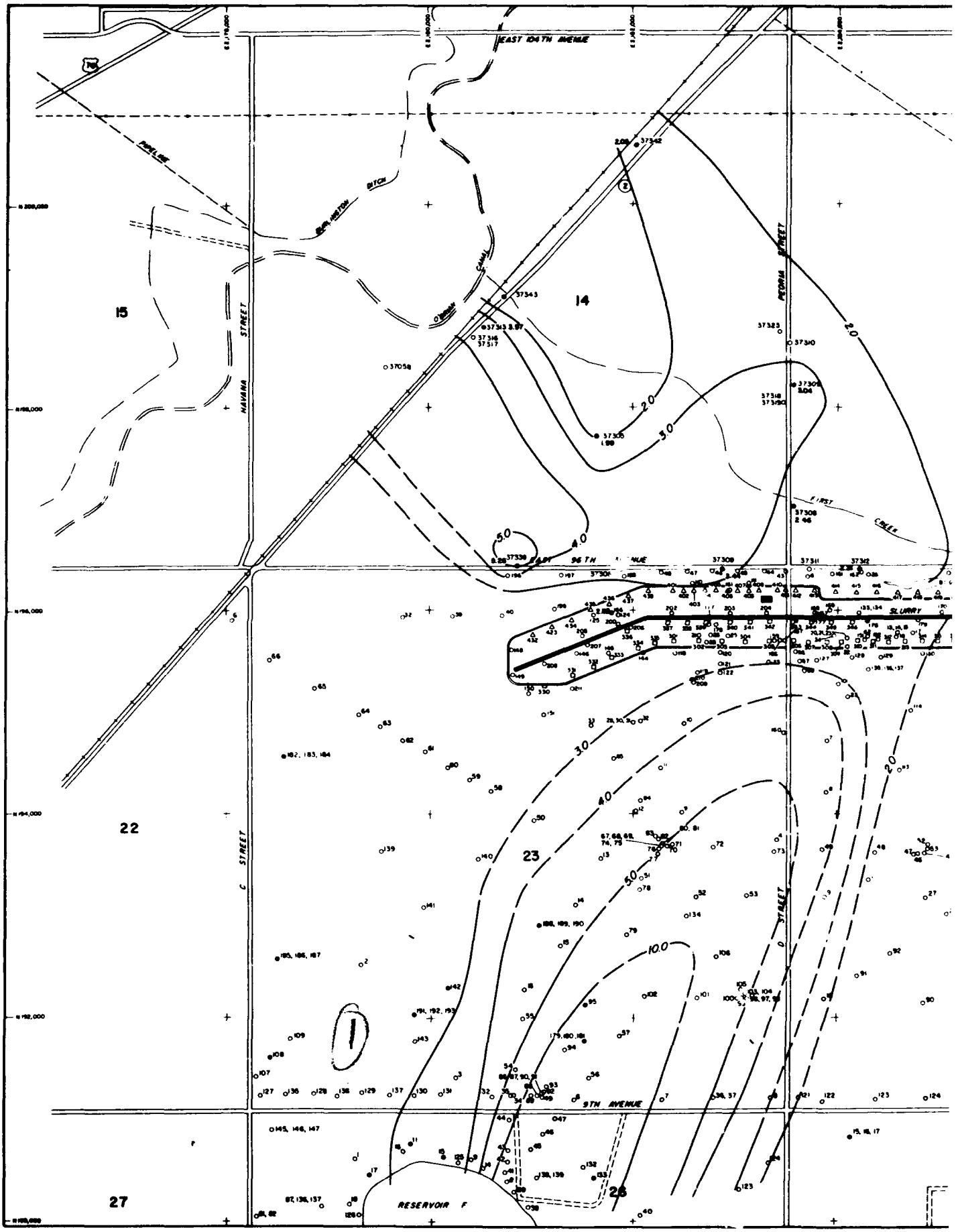
REVIEWED BY
D.W. THOMPSON

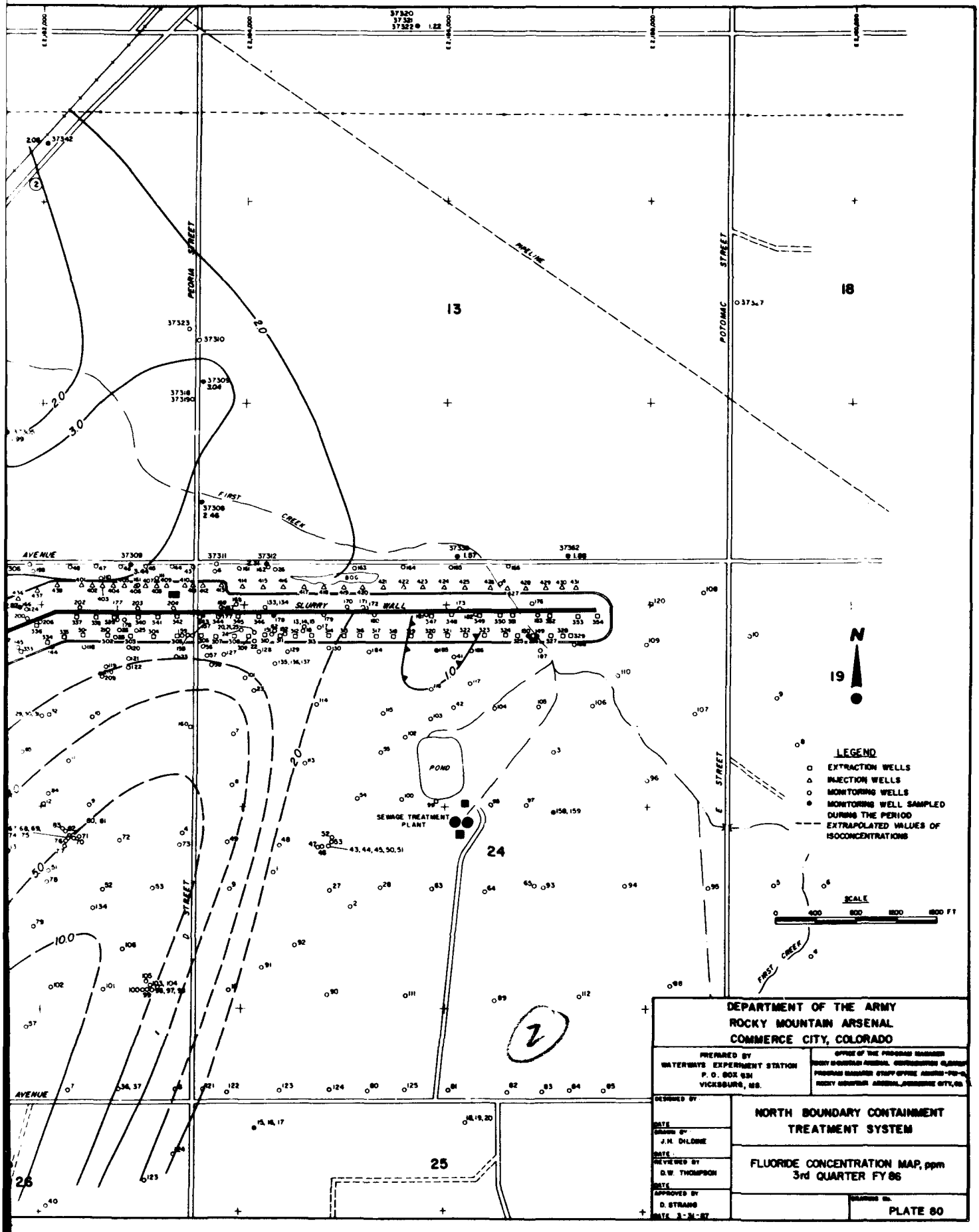
APPROVED BY
D. STRAUB

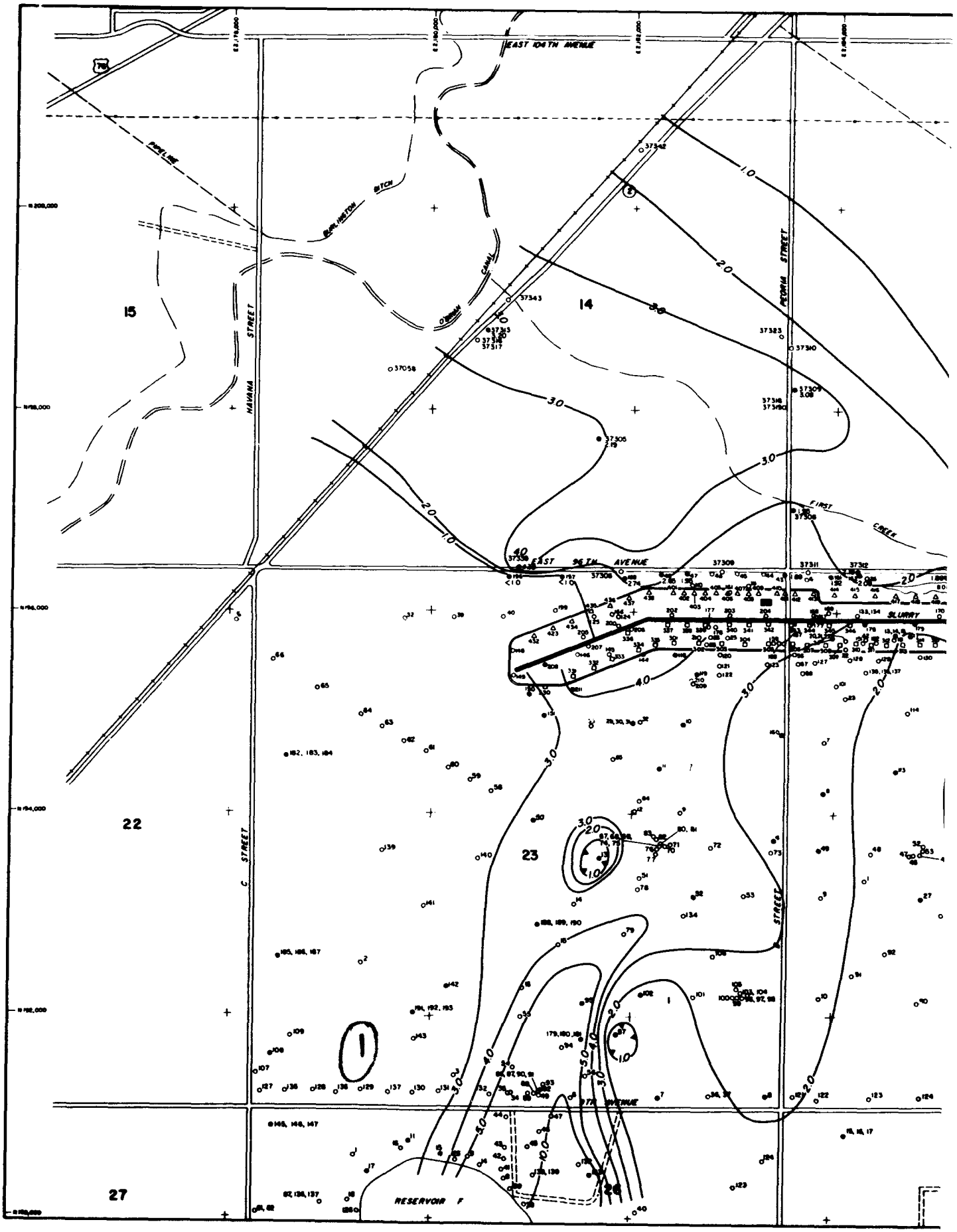
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM

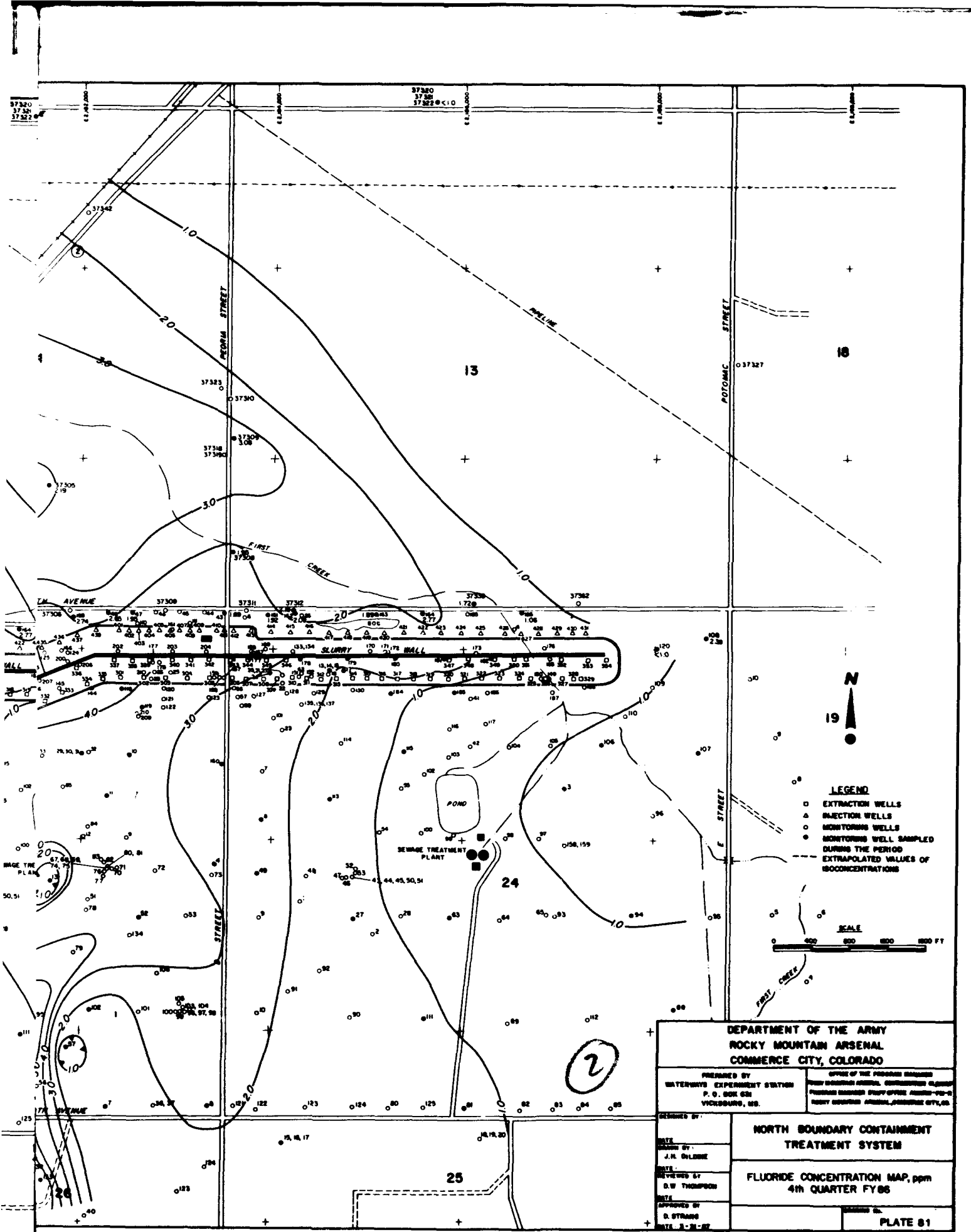
FLUORIDE CONCENTRATION MAP, ppm
2nd QUARTER FY 86

PLATE 78


EAST 104TH AVENUE
PORT LINE
HAVANA STREET
PEORIA STREET
C STREET
D STREET
96TH AVENUE
SLURRY
FIRST CREEK
RESERVOIR F
15
14
22
23
26
27
2.0
3.0
4.0
5.0
10.0


PEORIA STREET
POTOMAC STREET
E STREET
D STREET
PIPELINE
FIRST CREEK
SLURRY WALL
POND
SEWAGE TREATMENT PLANT
AVENUE
13
18
19
24
25
26
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1600 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
FLUORIDE CONCENTRATION MAP, ppm
3rd QUARTER FY 86
PLATE 80


EAST 104TH AVENUE
PIPE LINE
BURLINGTON DITCH
O'BRIAN CANAL
HAVANA STREET
PEORIA STREET
FIRST CREEK
EAST 96TH AVENUE
SLURRY
C STREET
E STREET
96TH AVENUE
RESERVOIR F
15
14
22
23
27
26
1
1.0
2.0
3.0
4.0
5.0
10.0


PEORIA STREET
POTOMAC STREET
E STREET
PIPELINE
FIRST CREEK
SLURRY WALL
SEWAGE TREATMENT PLANT
POND
13
18
19
24
25
N
LEGEND
EXTRACTION WELLS
INJECTION WELLS
MONITORING WELLS
MONITORING WELL SAMPLED DURING THE PERIOD
EXTRAPOLATED VALUES OF ISOCONCENTRATIONS
SCALE
0 400 800 1600 2400 FT
DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
FLUORIDE CONCENTRATION MAP, ppm
4th QUARTER FY86
PLATE 81